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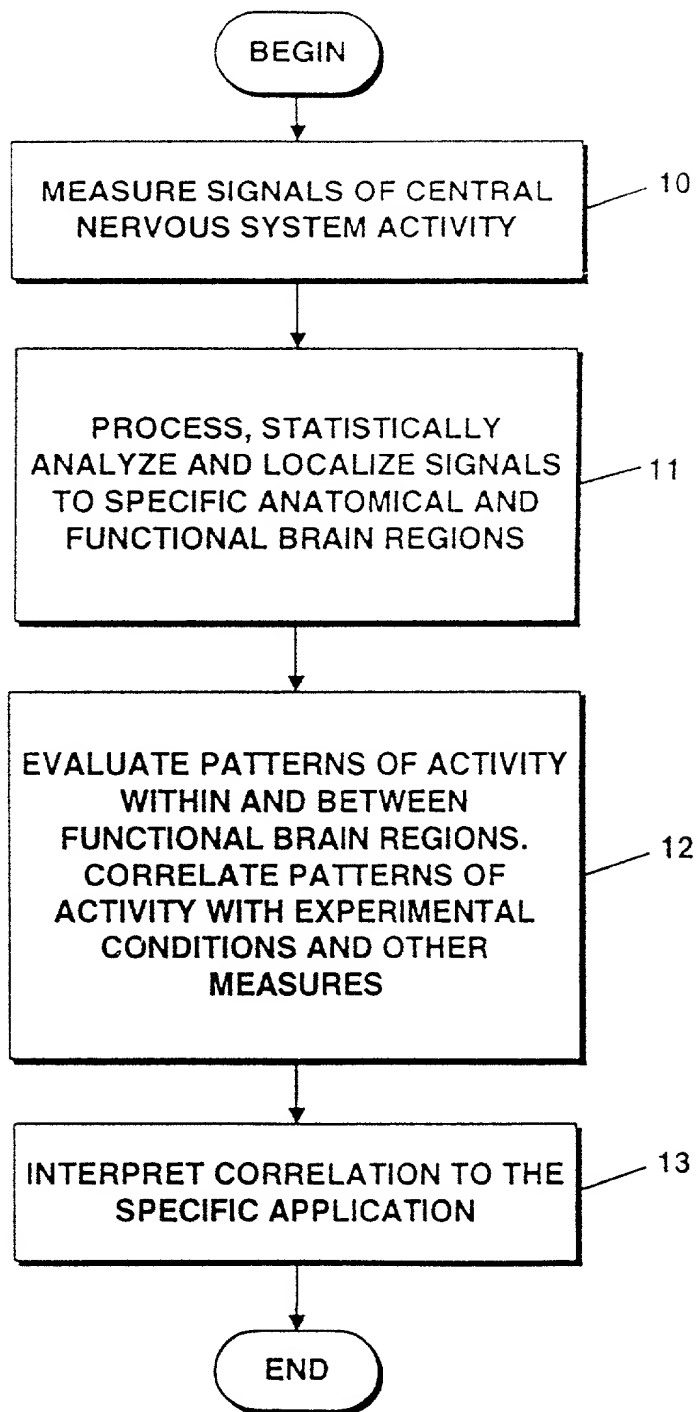


Figure 1

METHOD AND APPARATUS FOR OBJECTIVELY MEASURING PAIN,
PAIN TREATMENT AND OTHER RELATED TECHNIQUES

Lino Becerra, Et Al.
CASE NO. MGH-004BUS

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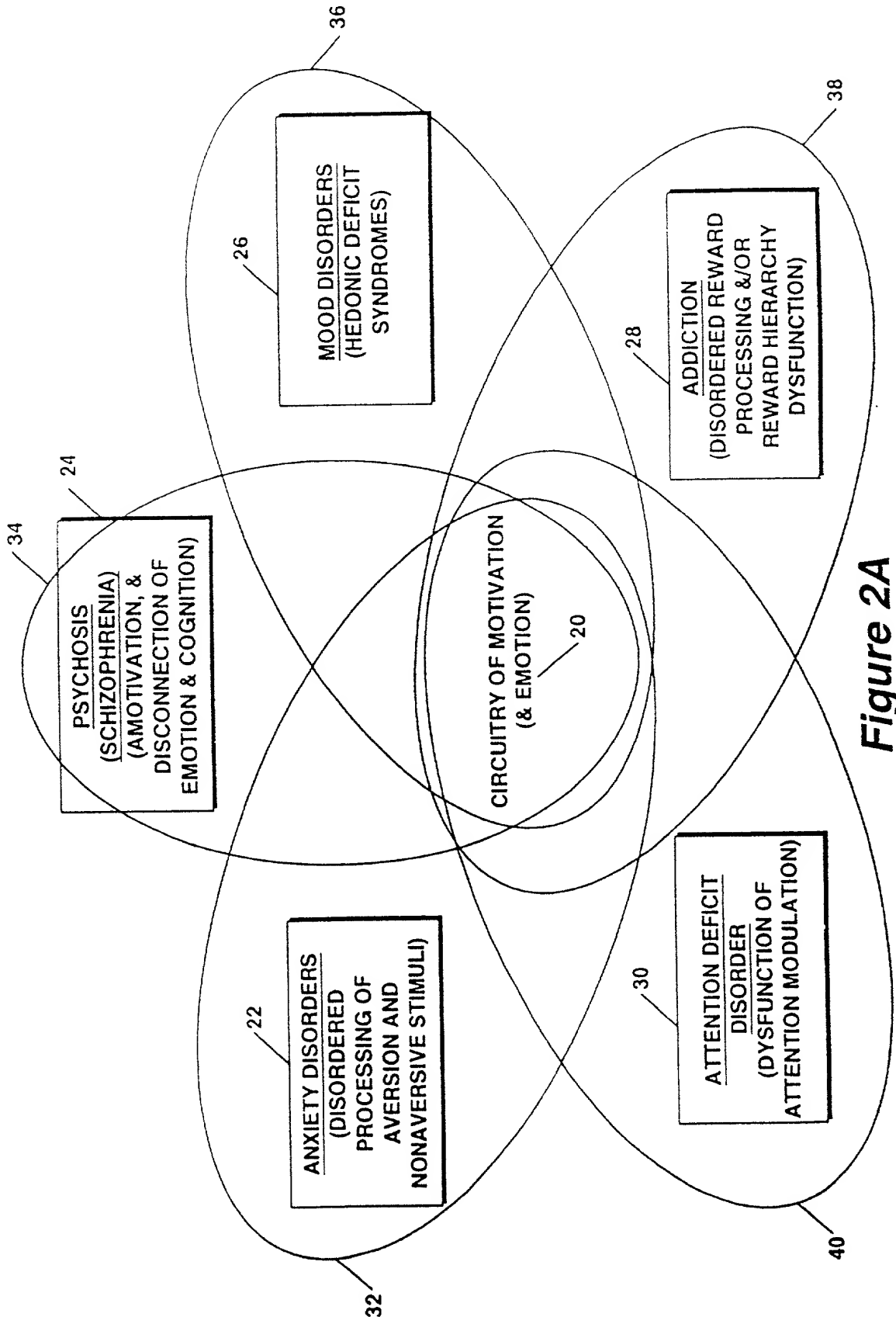


Figure 2A

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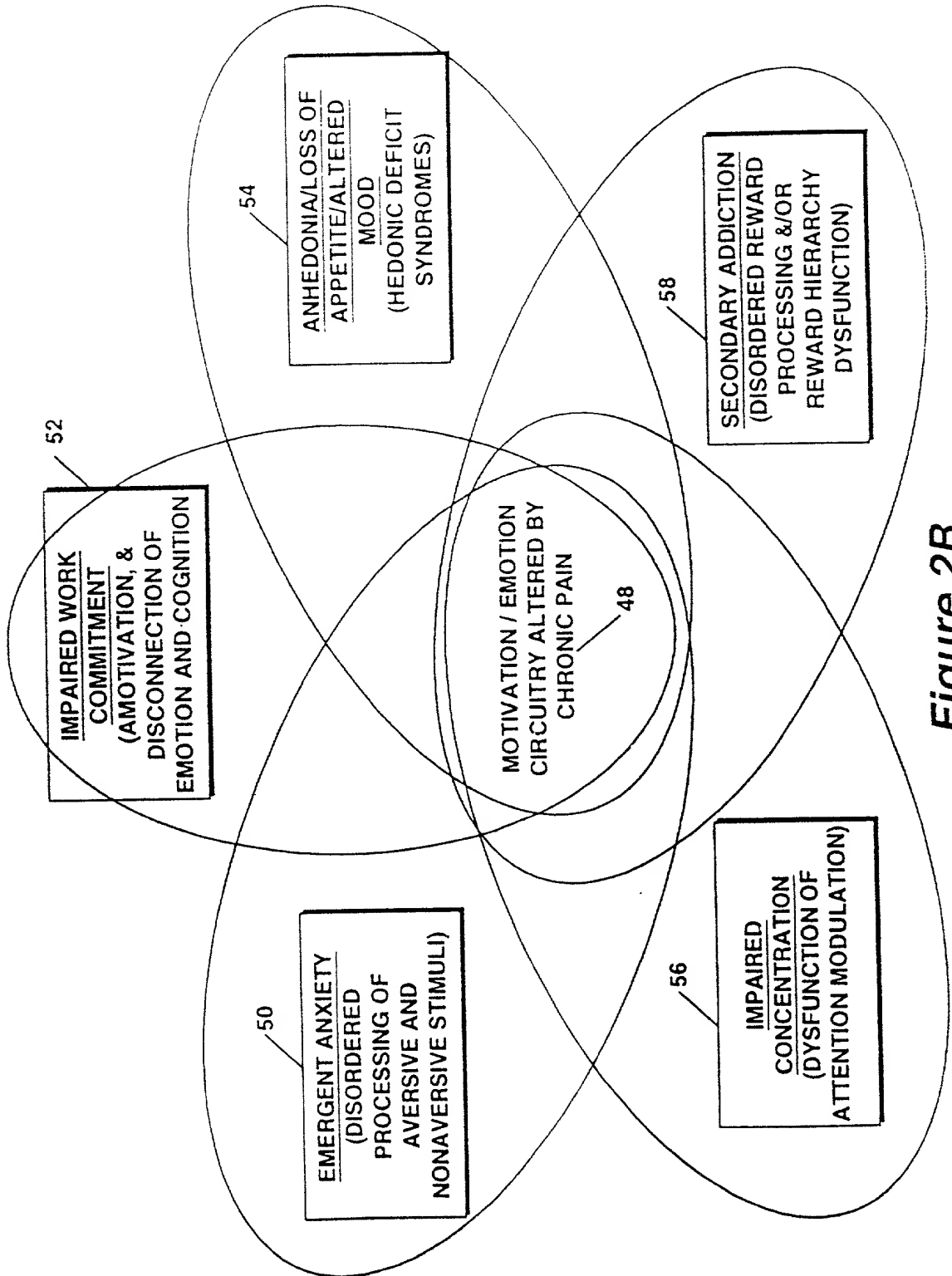


Figure 2B

Figure 2C

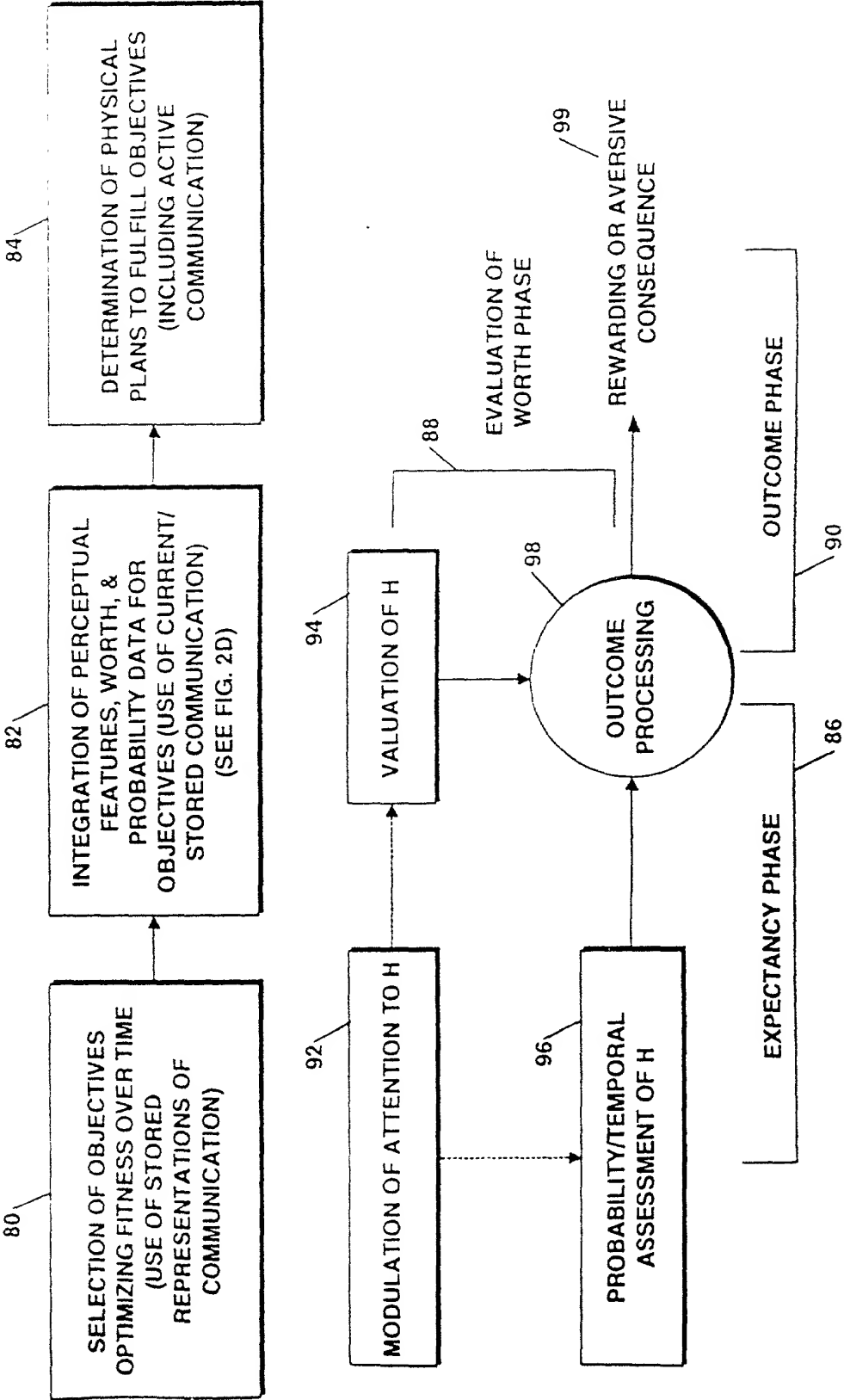


Figure 2D

METHOD AND APPARATUS FOR OBJECTIVELY MEASURING PAIN,
PAIN TREATMENT AND OTHER RELATED TECHNIQUES

Lino Becerra, Et Al.
CASE NO. MGH-004BUS

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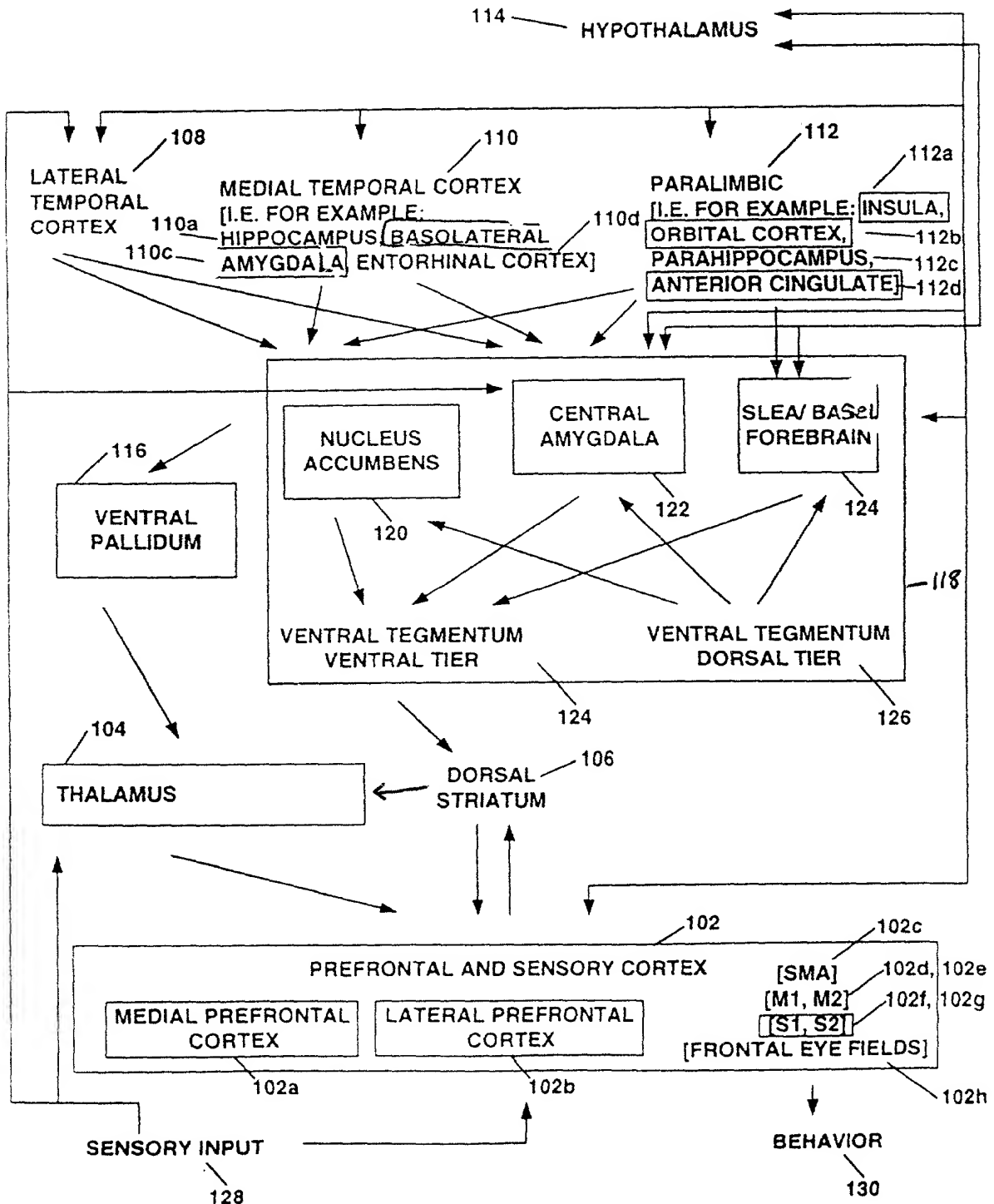
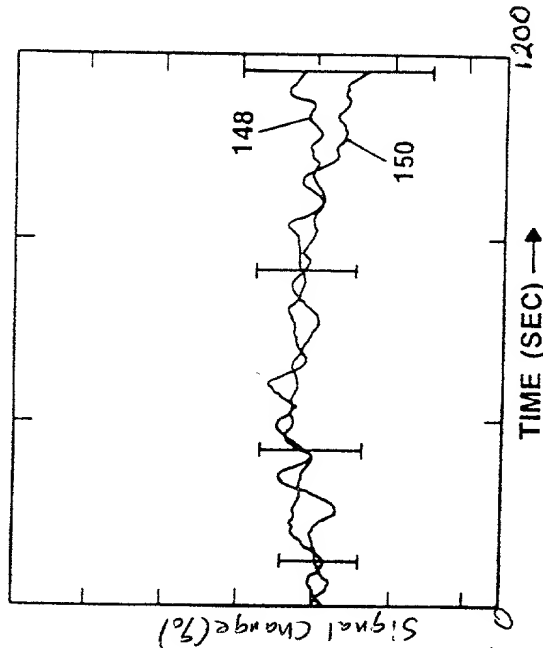
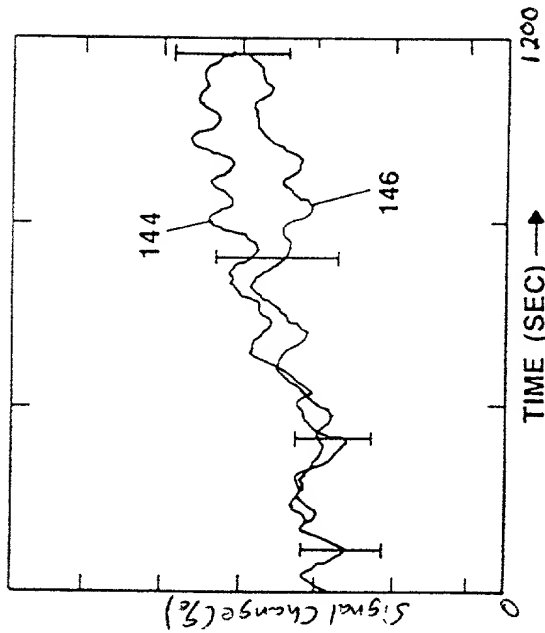
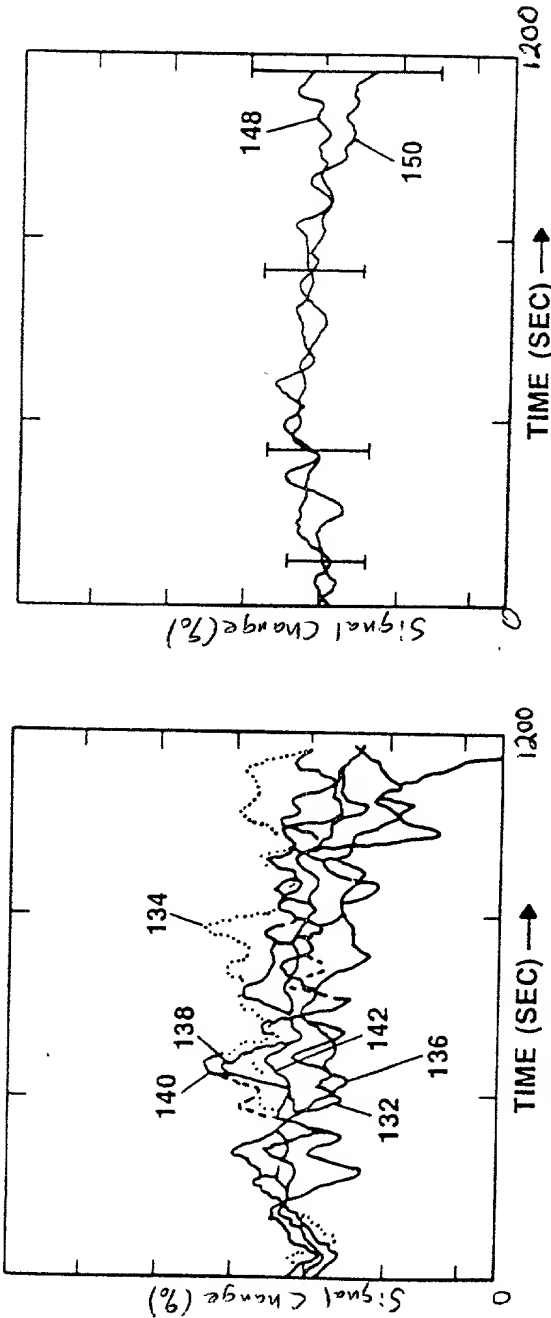
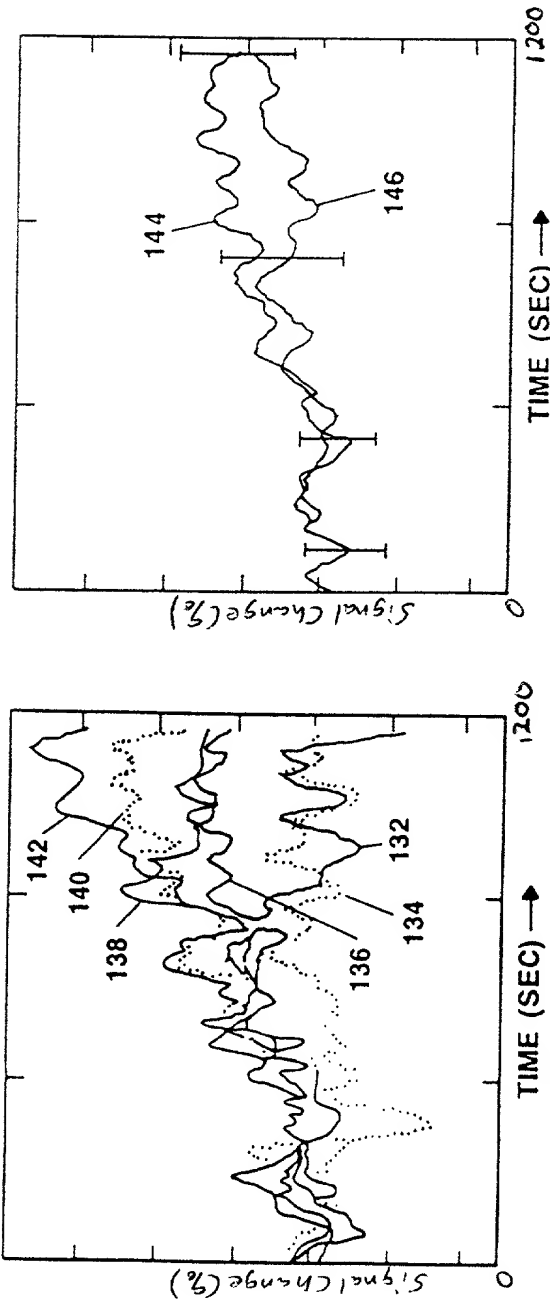


Figure 3



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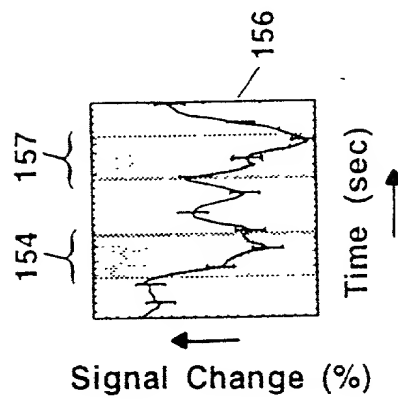


Figure 3F

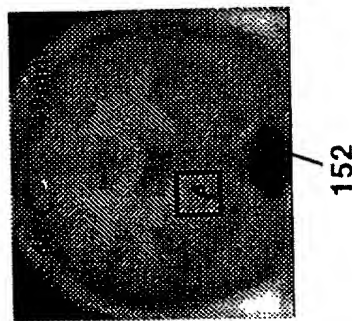
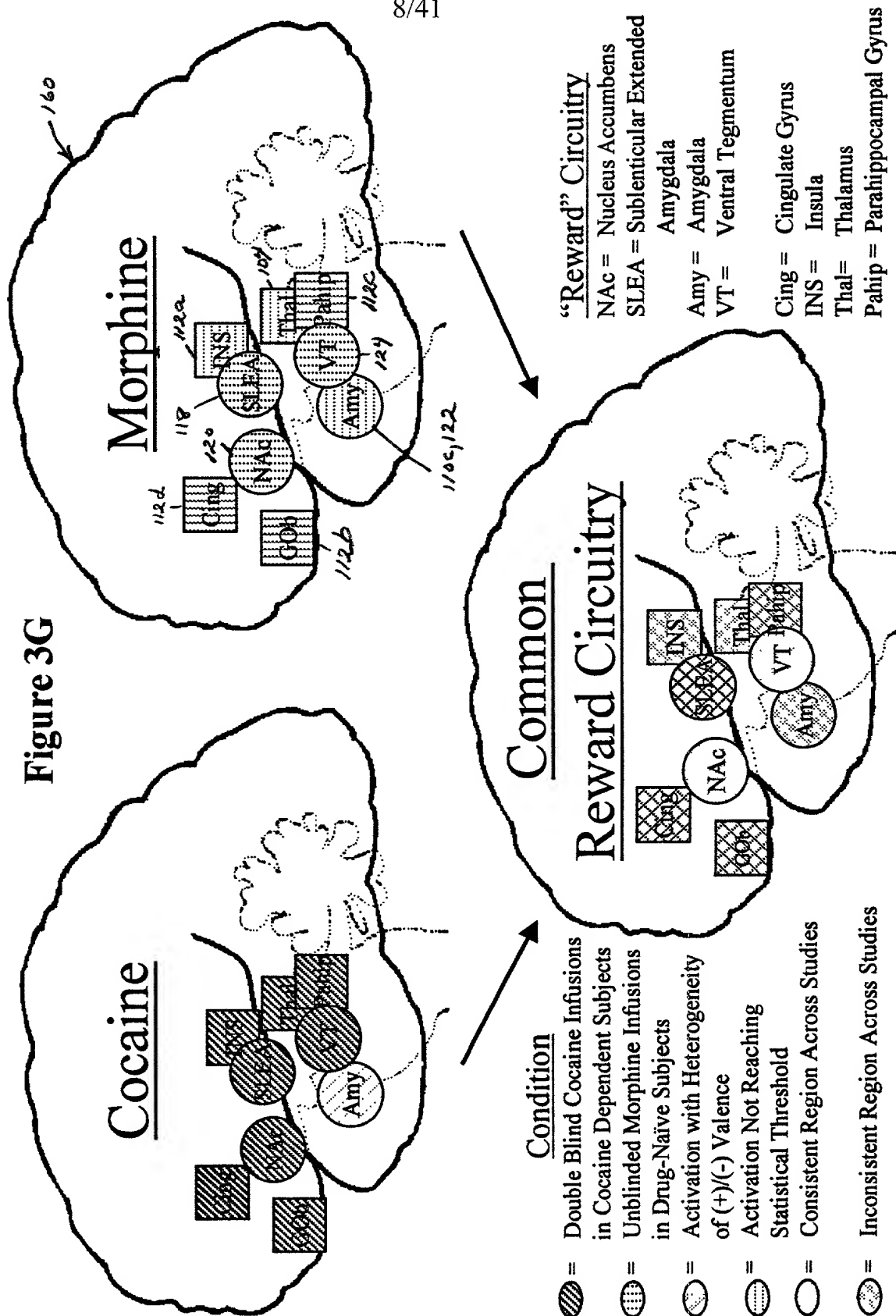


Figure 3E

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Figure 3G



METHOD AND APPARATUS FOR OBJECTIVELY MEASURING PAIN,
PAIN TREATMENT AND OTHER RELATED TECHNIQUES

Lino Becerra, Et Al.
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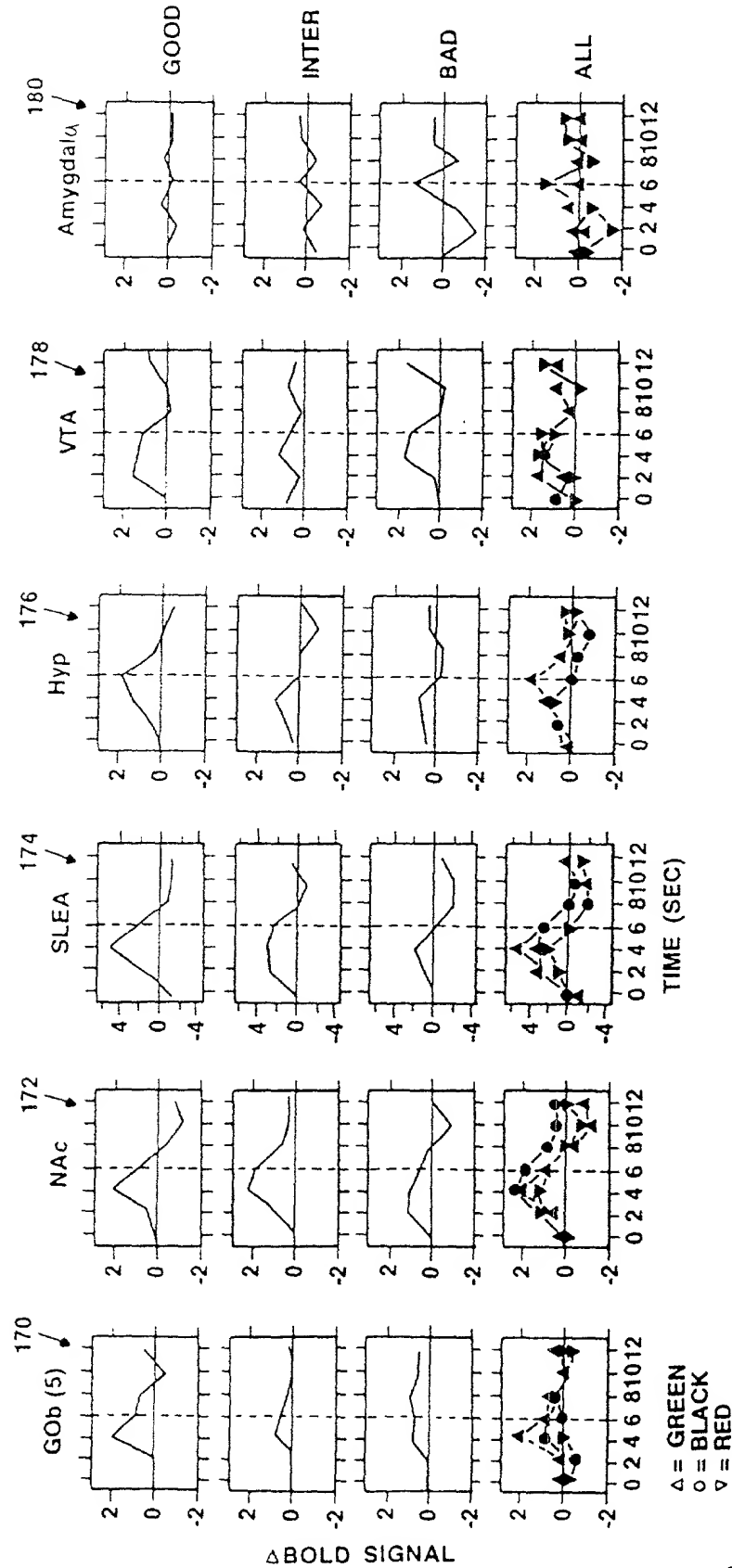


Figure 3H

METHOD AND APPARATUS FOR OBJECTIVELY MEASURING PAIN, PAIN TREATMENT AND OTHER RELATED TECHNIQUES

Lino Becerra, Et Al.
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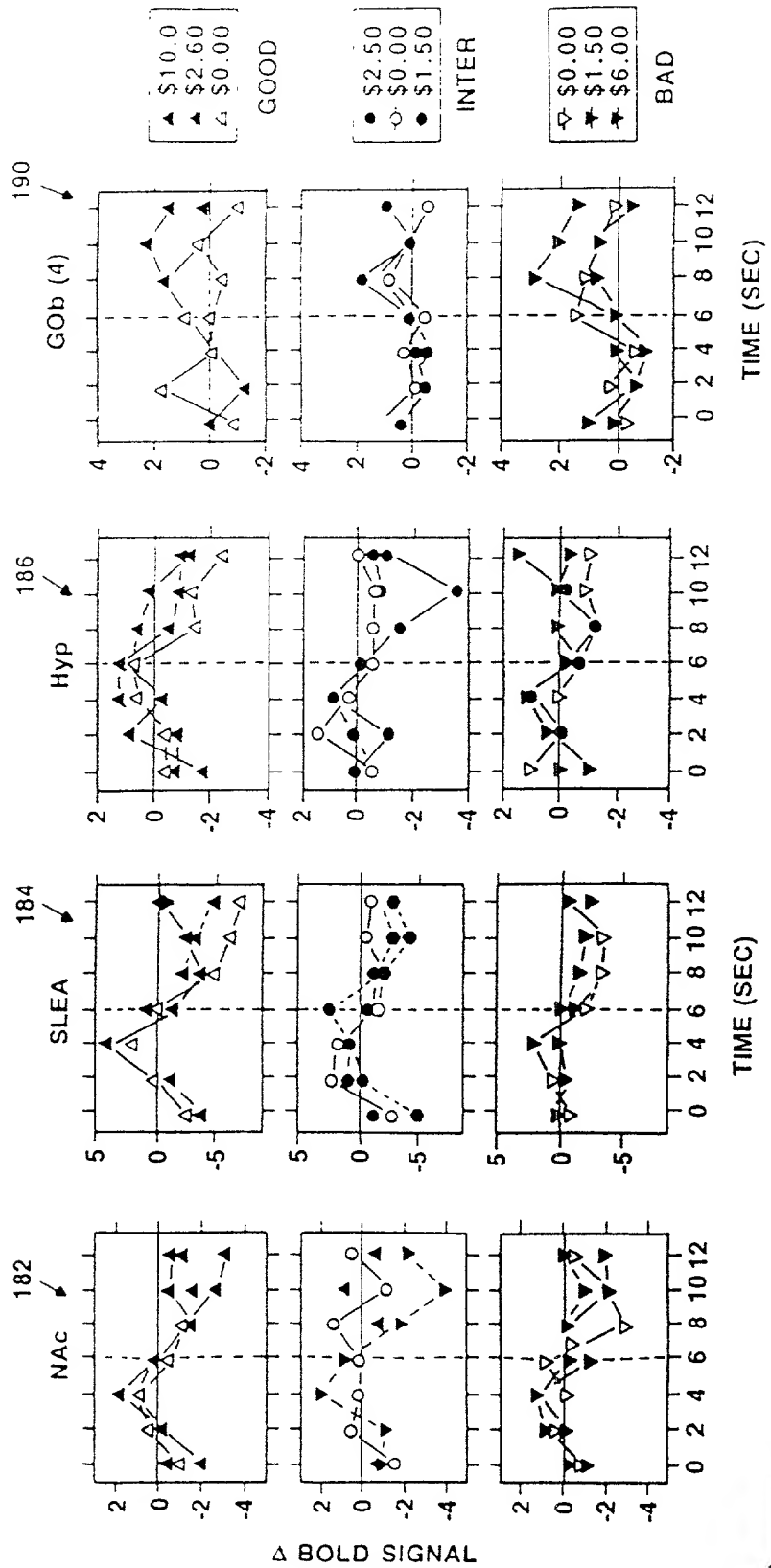


Figure 31

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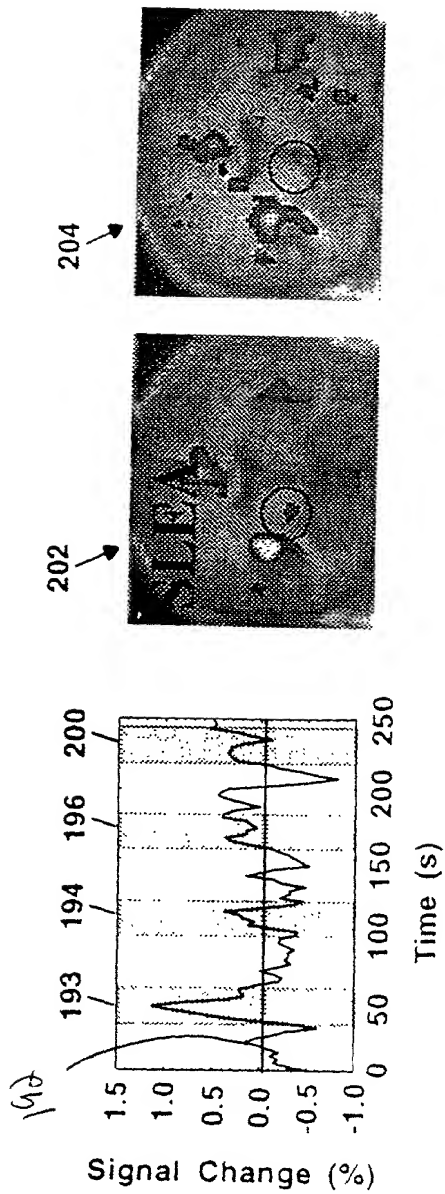


Figure 3J Figure 3K Figure 3L

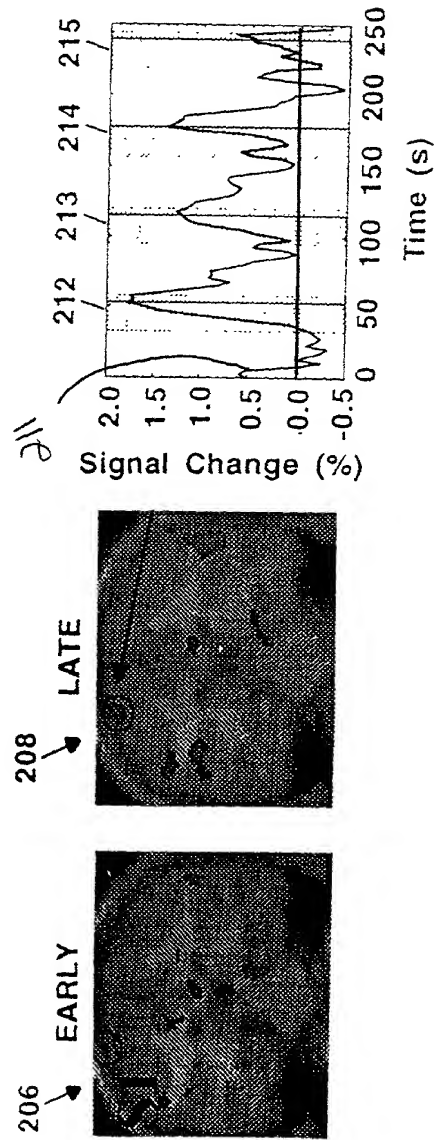


Figure 3M Figure 3N Figure 3O

METHOD AND APPARATUS FOR OBJECTIVELY MEASURING PAIN,
PAIN TREATMENT AND OTHER RELATED TECHNIQUES

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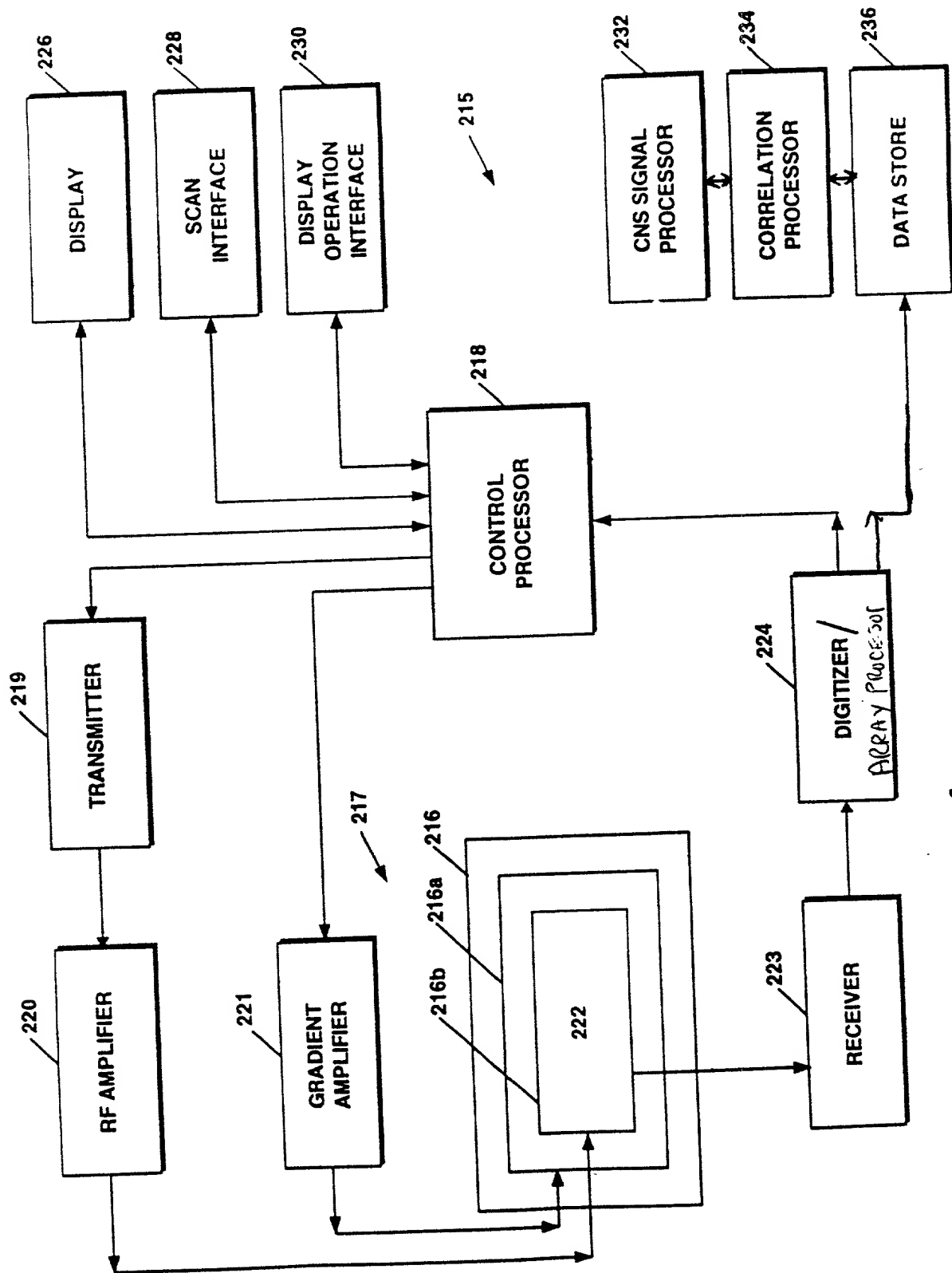


Figure 4

13/41

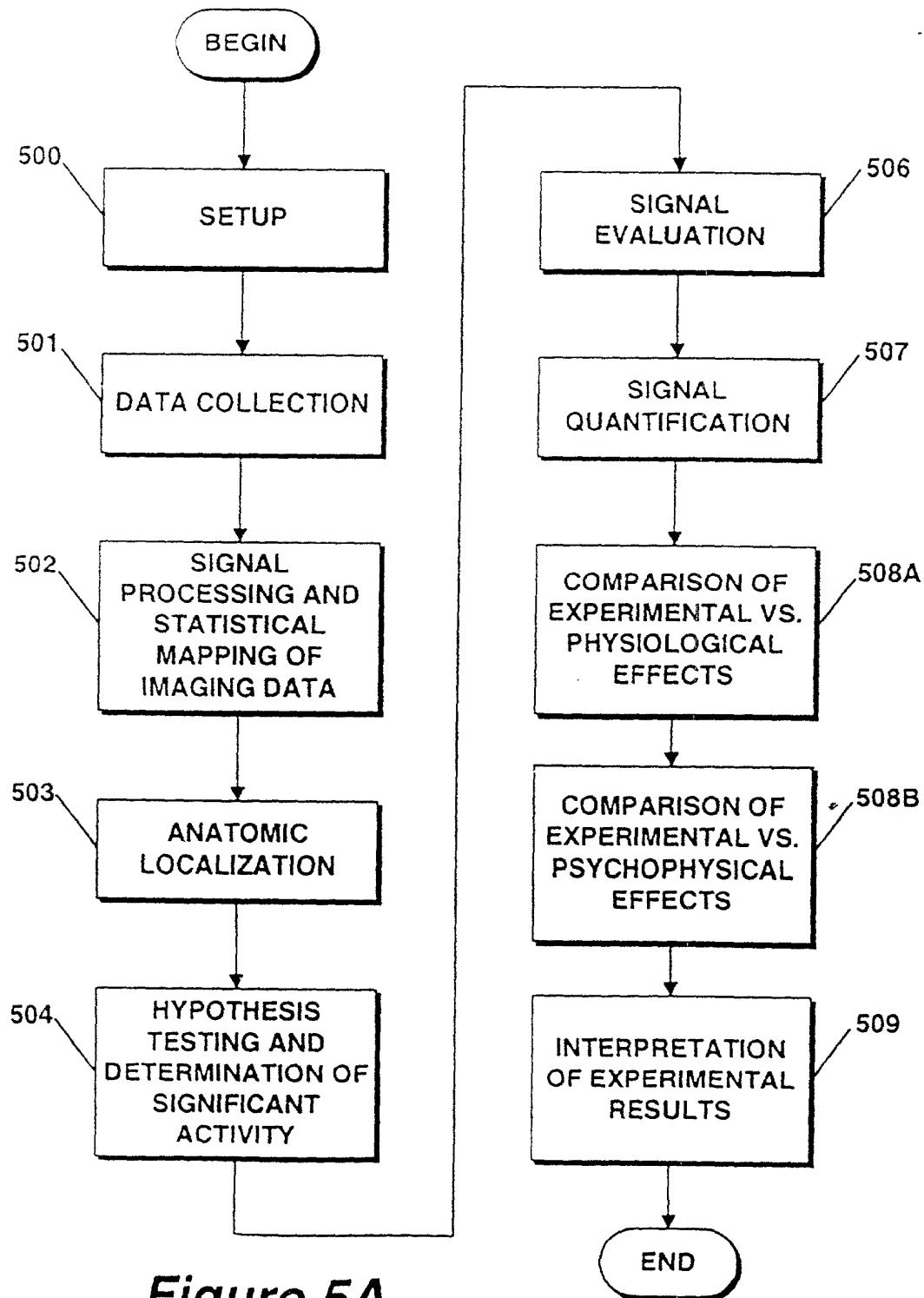


Figure 5A

METHOD AND APPARATUS FOR OBJECTIVELY MEASURING PAIN,
PAIN TREATMENT AND OTHER RELATED TECHNIQUES

Lino Becerra, Et Al.
CASE NO. MGH-004BUS

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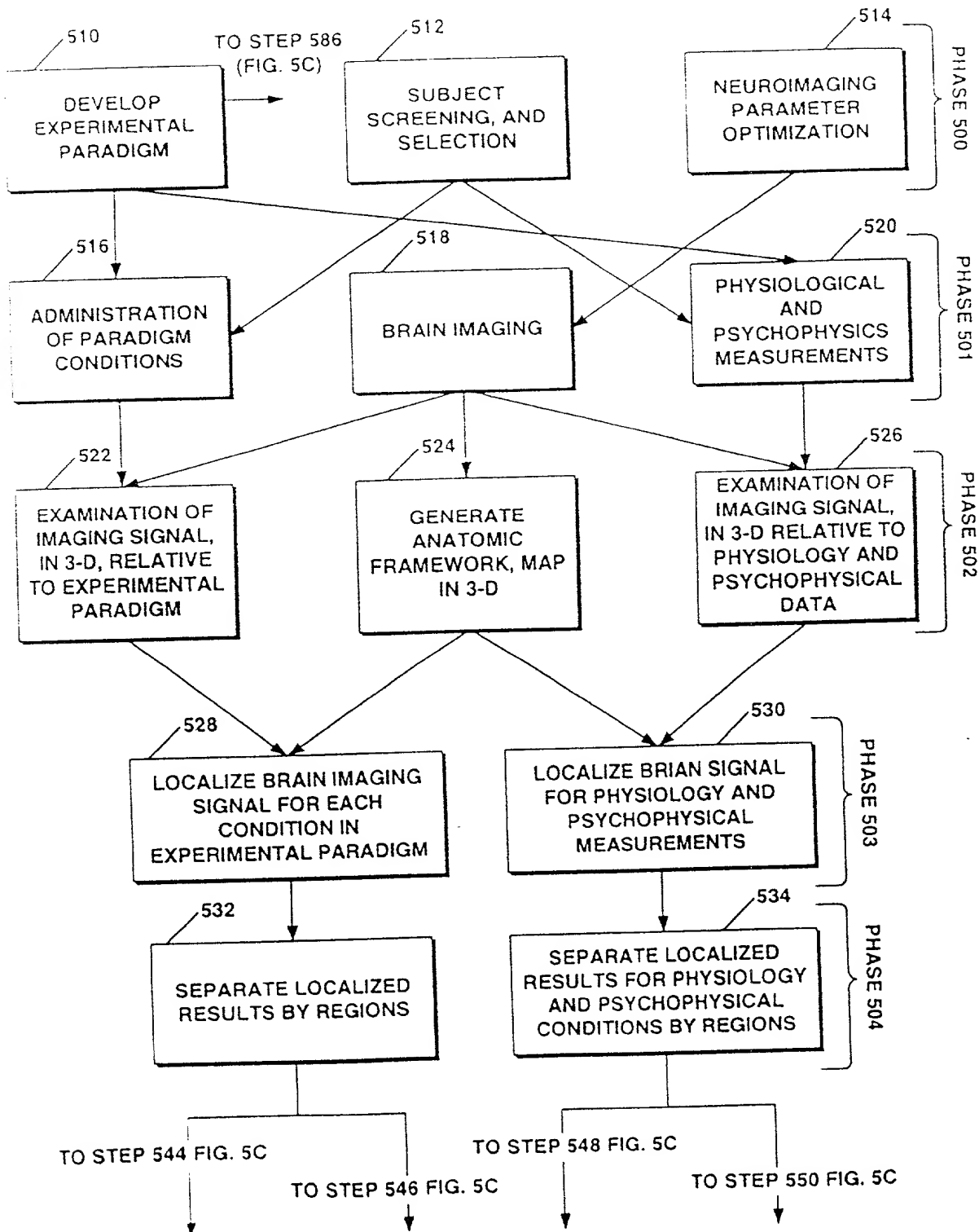


Figure 5B

METHOD AND APPARATUS FOR OBJECTIVELY MEASURING PAIN,
PAIN TREATMENT AND OTHER RELATED TECHNIQUES

Lino Becerra, Et Al.
CASE NO. MGH-004BUS

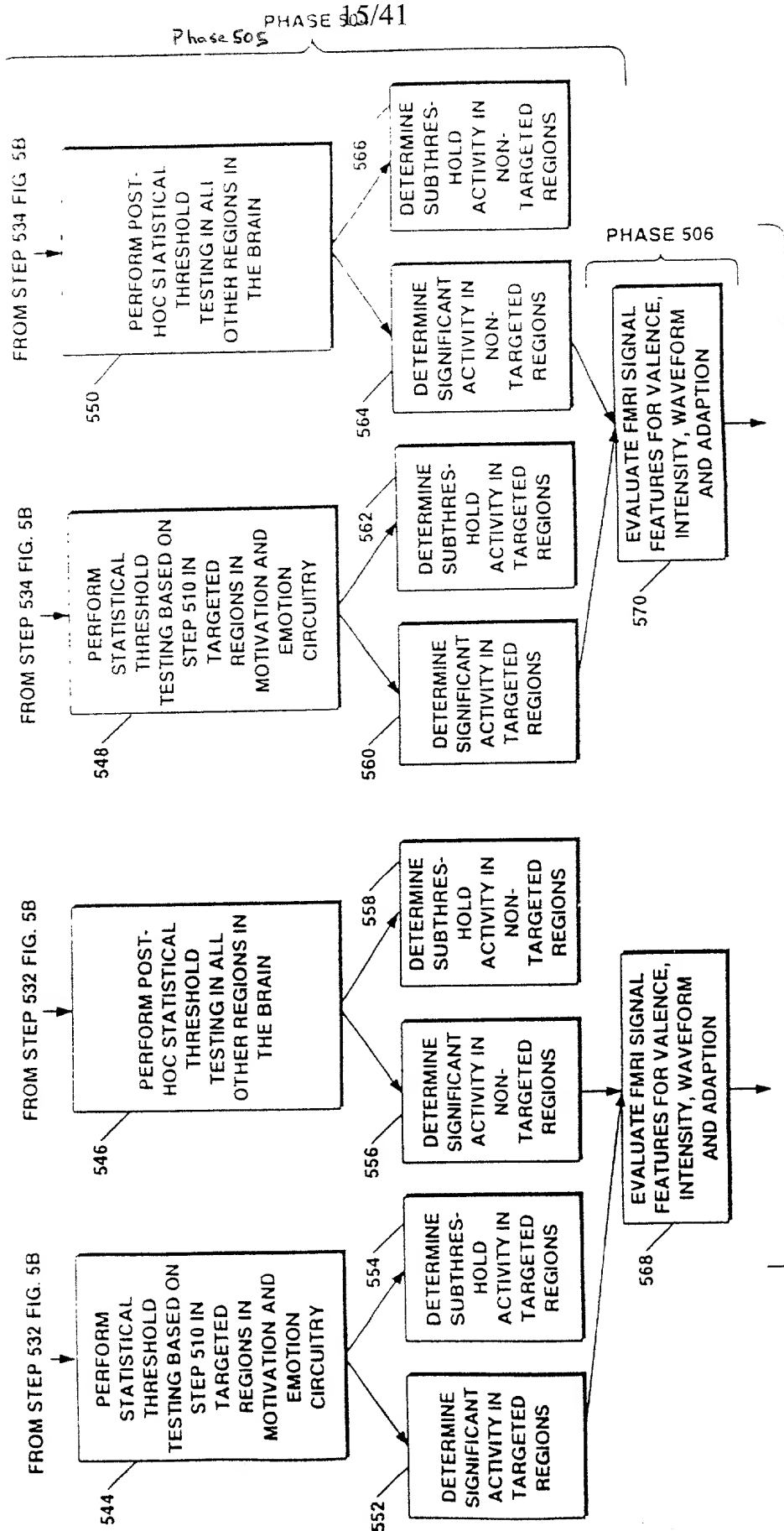


Figure 5C

TO FIGURE 5D

METHOD AND APPARATUS FOR OBJECTIVELY MEASURING PAIN,
PAIN TREATMENT AND OTHER RELATED TECHNIQUES

Lino Becerra, Et Al.
CASE NO. MGH-004BUS

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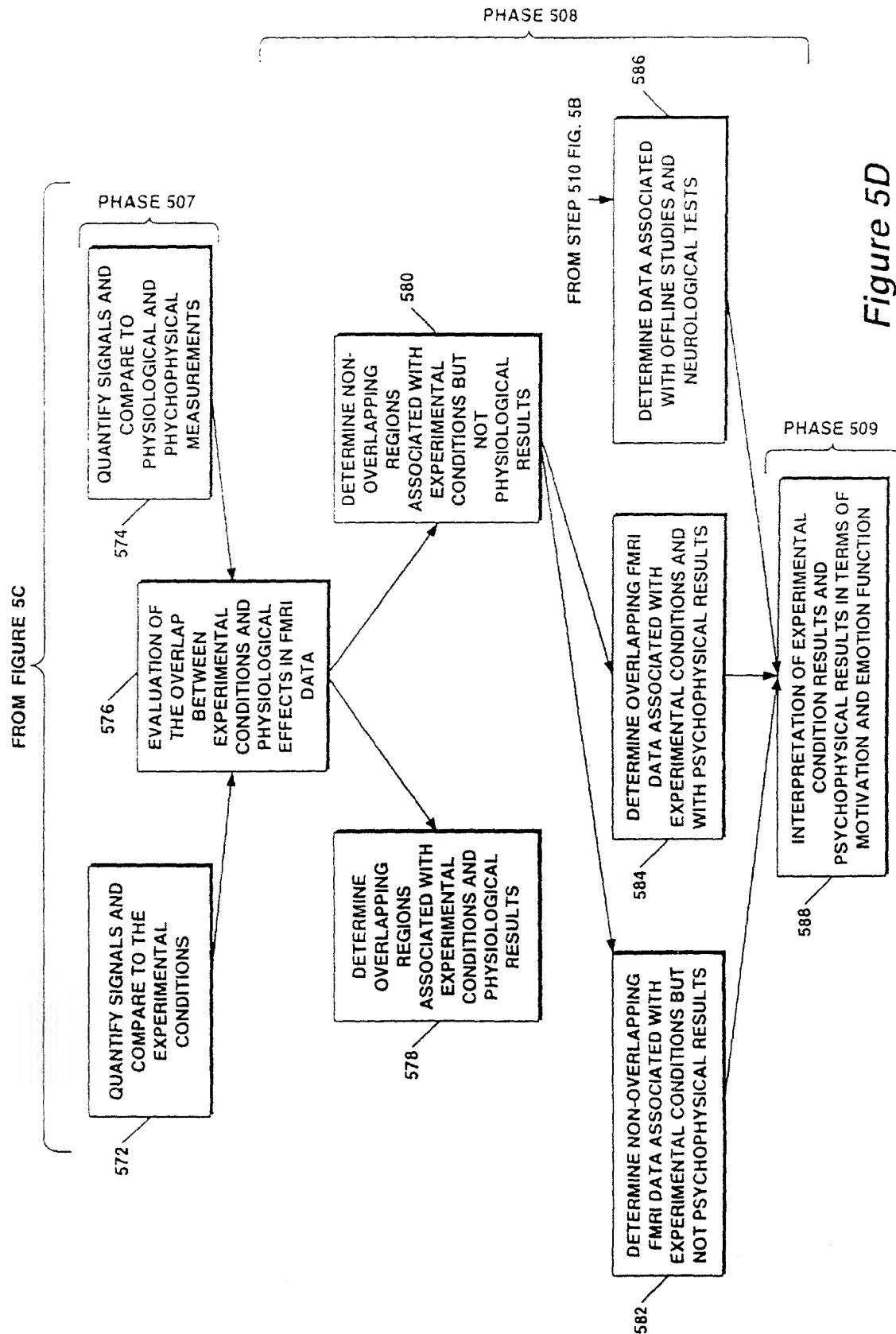


Figure 5D

METHOD AND APPARATUS FOR OBJECTIVELY MEASURING PAIN,
PAIN TREATMENT AND OTHER RELATED TECHNIQUES

Lino Becerra, Et Al.
CASE NO. MGH-004BUS

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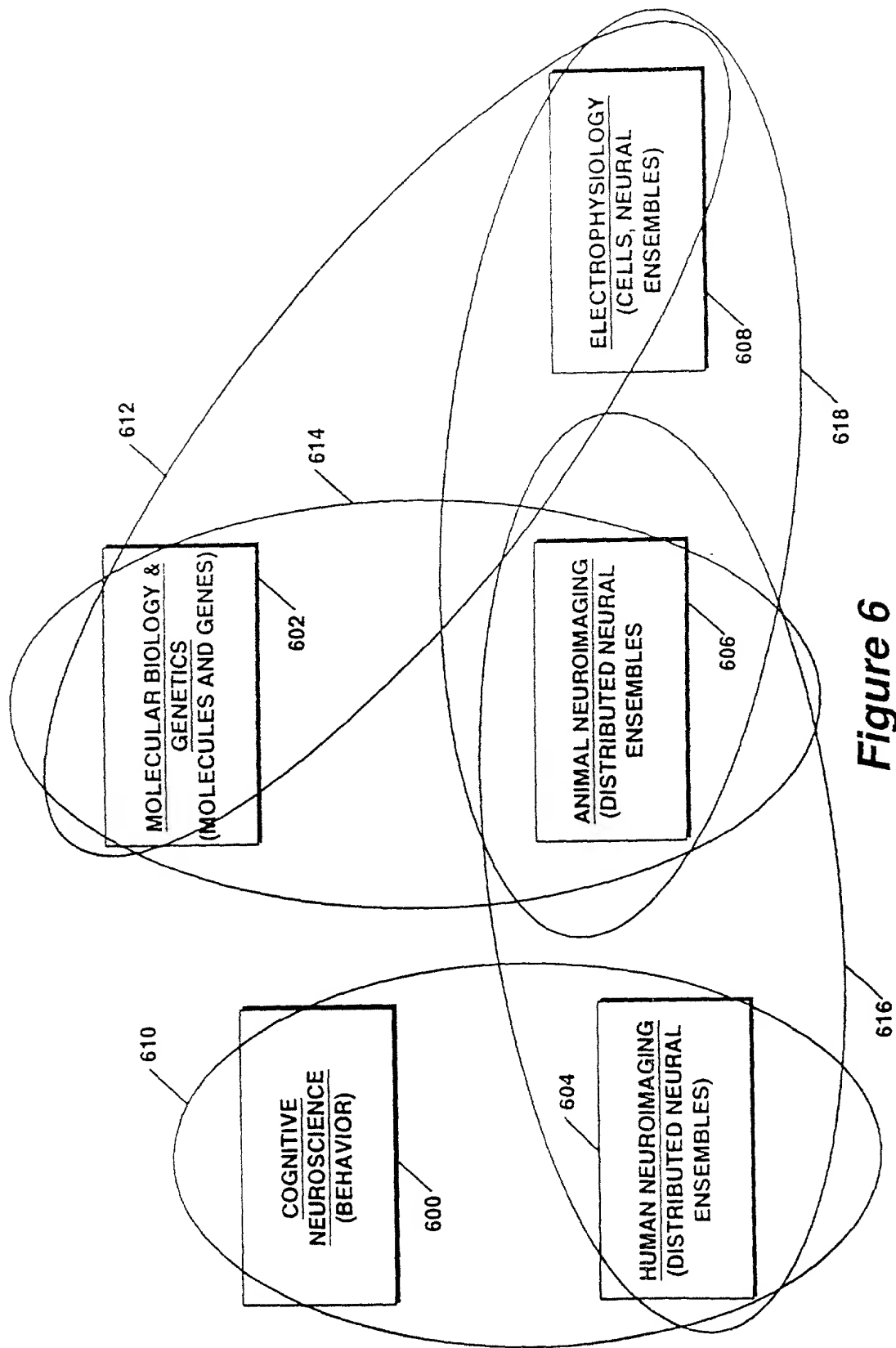
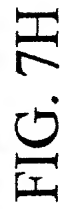
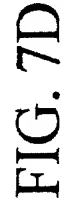
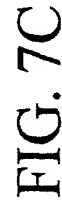
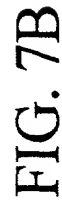
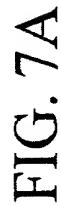


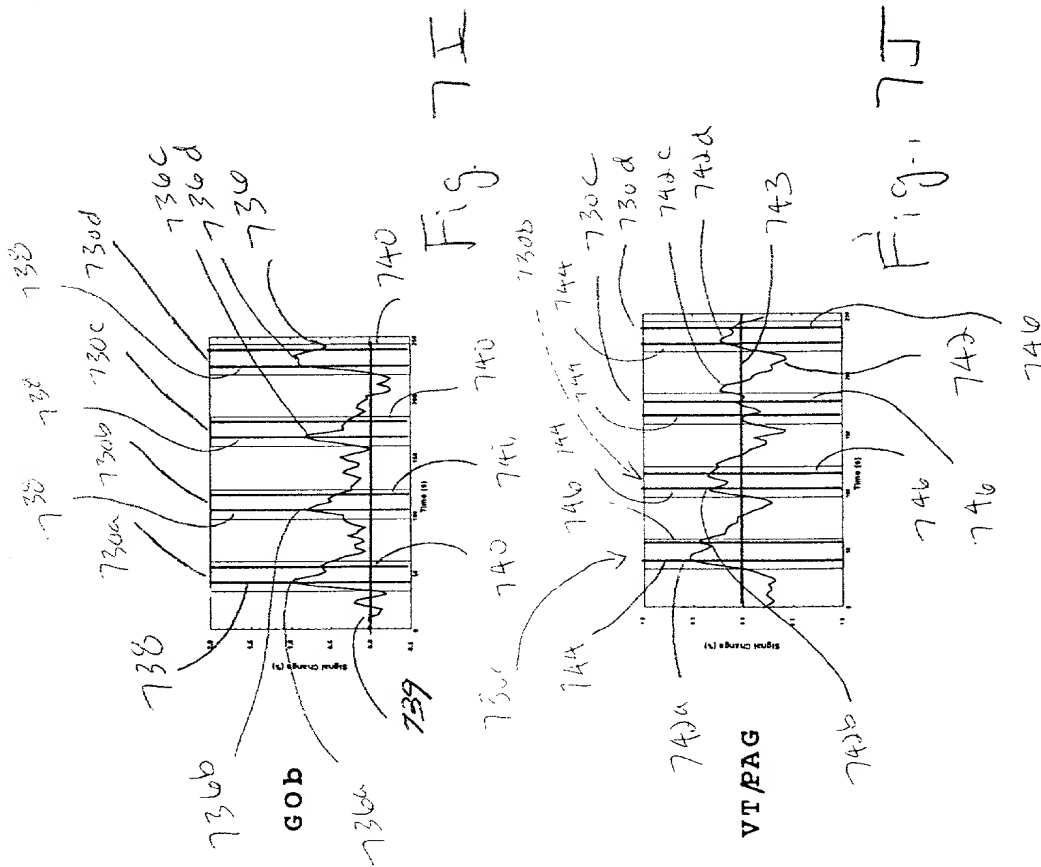
Figure 6



METHOD AND APPARATUS FOR OBJECTIVELY MEASURING PAIN,
PAIN TREATMENT AND OTHER RELATED TECHNIQUES

Lino Becerra, Et Al.
CASE NO. MGH-004BUS

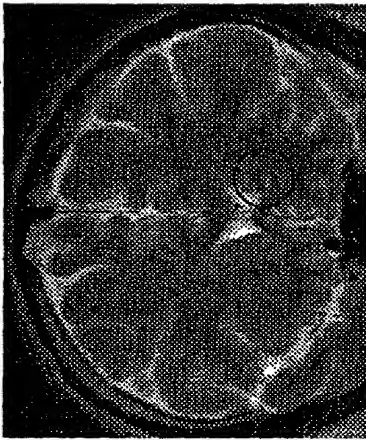
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METHOD AND APPARATUS FOR OBJECTIVELY MEASURING PAIN,
PAIN TREATMENT AND OTHER RELATED TECHNIQUES

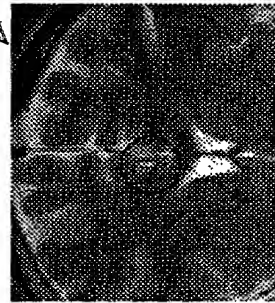
Lino Becerra, Et Al.
CASE NO. MGH-004BUS

35-41°C



NAC

Figure 8C



ACC

Figure 8A

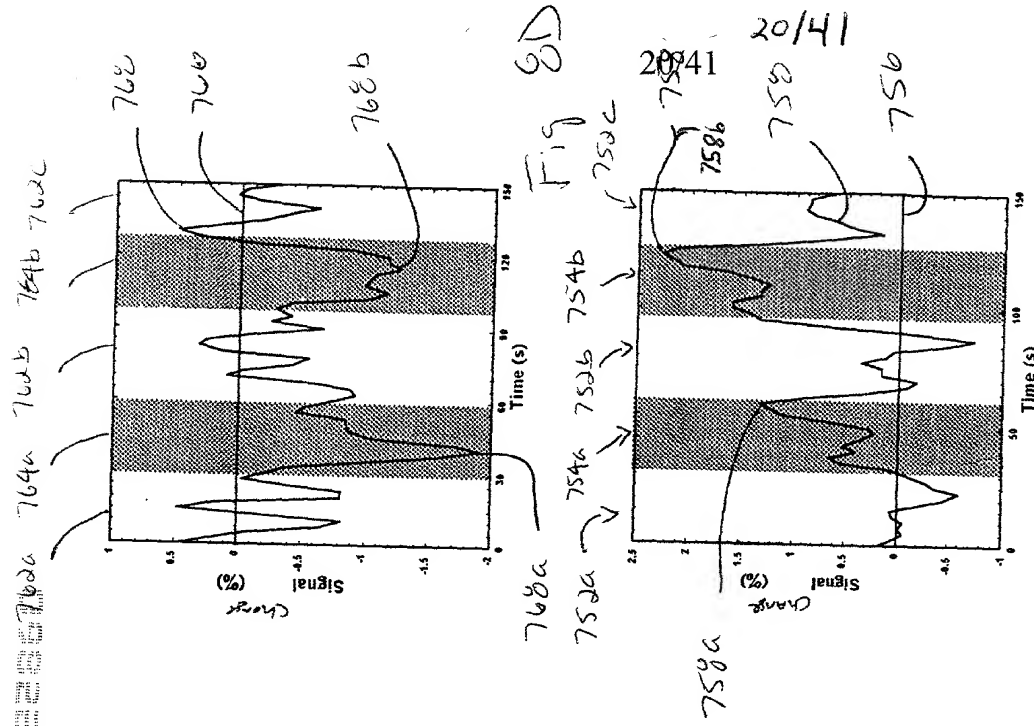


Figure 8B

METHOD AND APPARATUS FOR OBJECTIVELY MEASURING PAIN, PAIN TREATMENT AND OTHER RELATED TECHNIQUES

Lino Becerra, Et Al.
CASE NO. MGH-004BUS

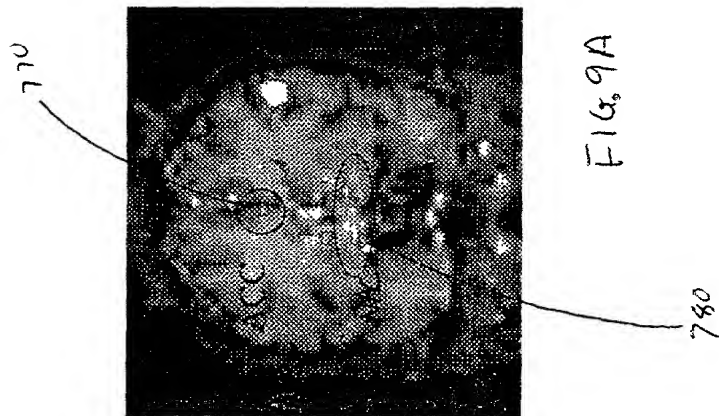


FIG. 9A

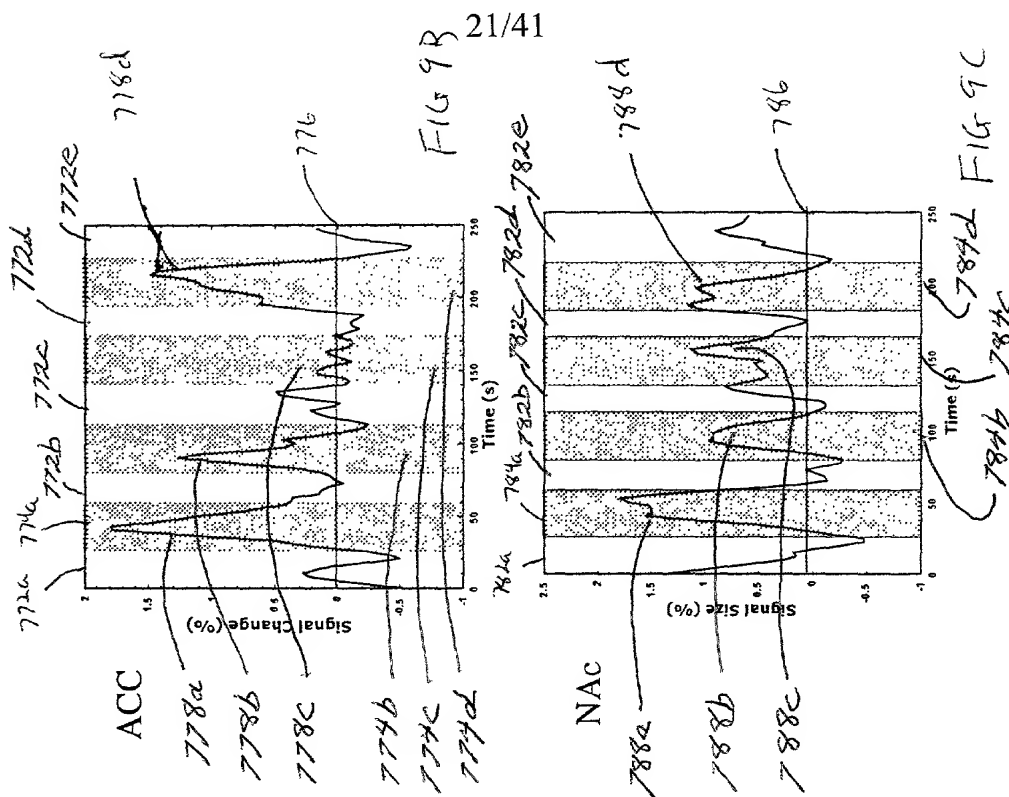


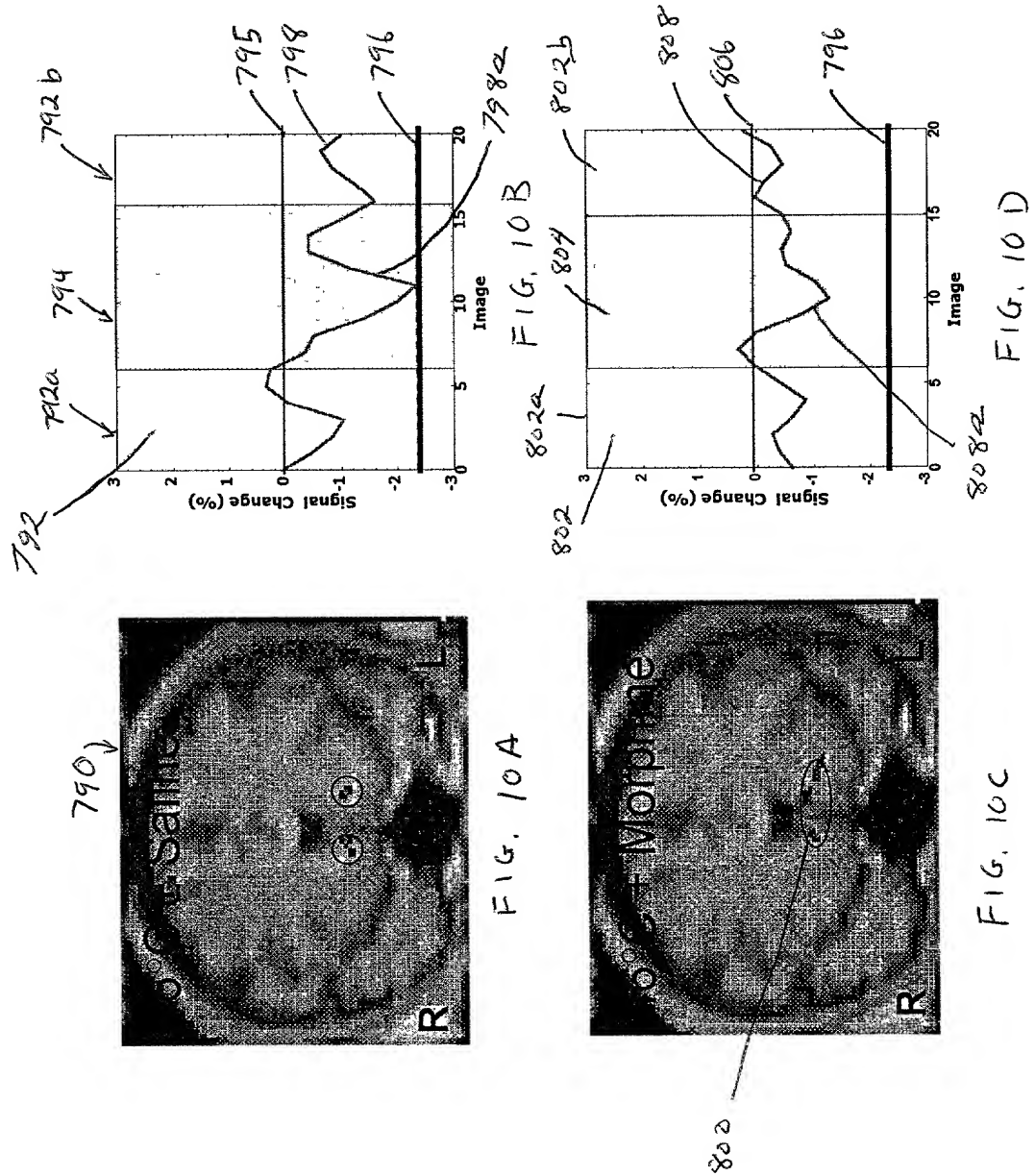
FIG. 9B

FIG. 9C

METHOD AND APPARATUS FOR OBJECTIVELY MEASURING PAIN, PAIN TREATMENT AND OTHER RELATED TECHNIQUES

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METHOD AND APPARATUS FOR OBJECTIVELY MEASURING PAIN,
PAIN TREATMENT AND OTHER RELATED TECHNIQUES

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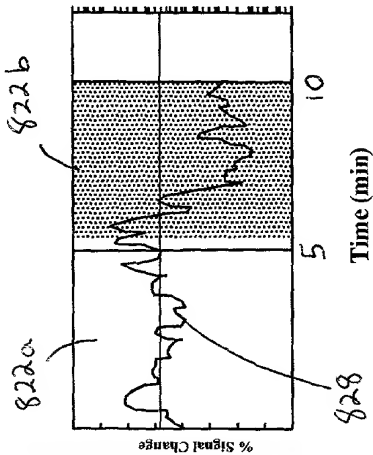
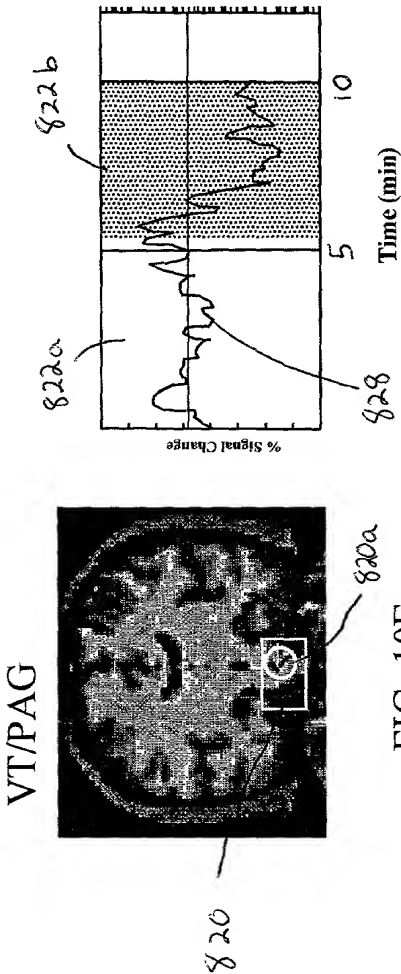


FIG. 10F

FIG. 10E

METHOD AND APPARATUS FOR OBJECTIVELY MEASURING PAIN,
PAIN TREATMENT AND OTHER RELATED TECHNIQUES

Lino Becerra, Et Al.
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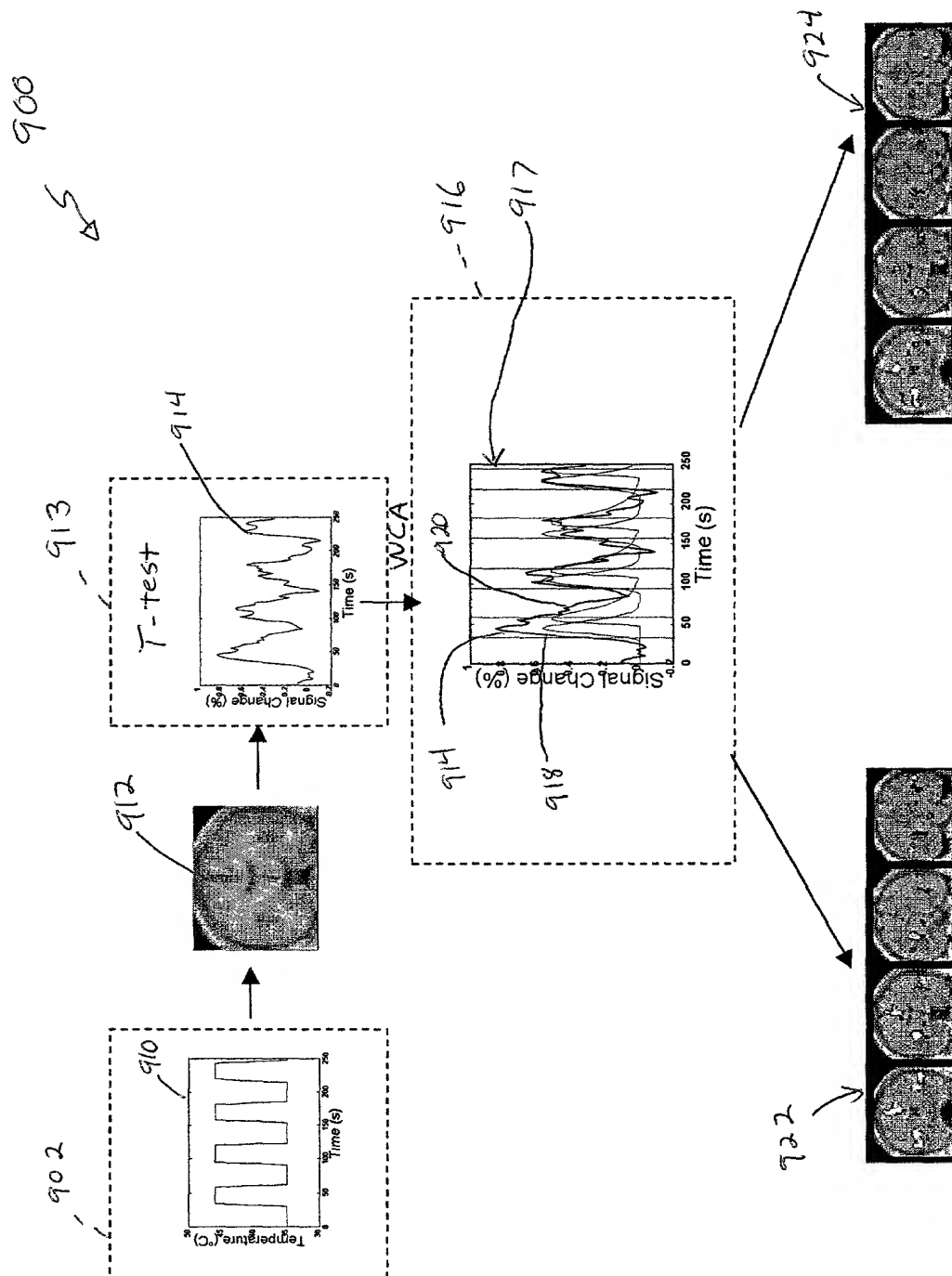


Figure 11

METHOD AND APPARATUS FOR OBJECTIVELY MEASURING PAIN,
PAIN TREATMENT AND OTHER RELATED TECHNIQUES

Lino Becerra, Et Al.
CASE NO. MGH-004BUS

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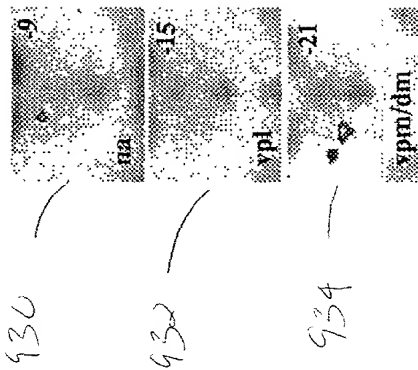


Fig 11A

Lino Becerra, Et Al.
CASE NO. MGH-004BUS

[illegible]

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METHOD AND APPARATUS FOR OBJECTIVELY MEASURING PAIN,
PAIN TREATMENT AND OTHER RELATED TECHNIQUES

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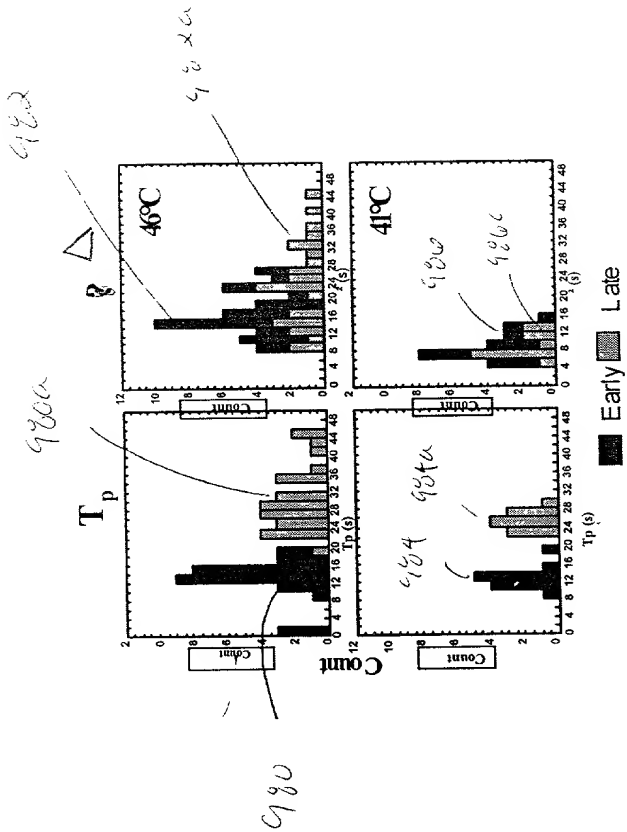


Figure 11D

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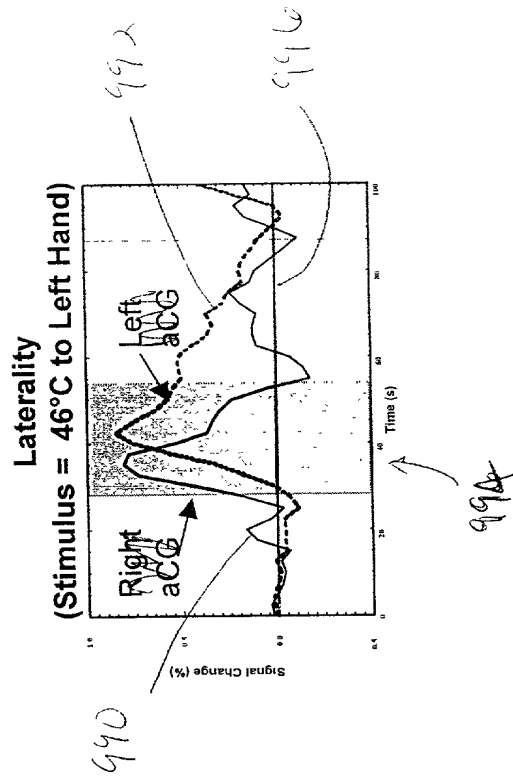


Figure 11E

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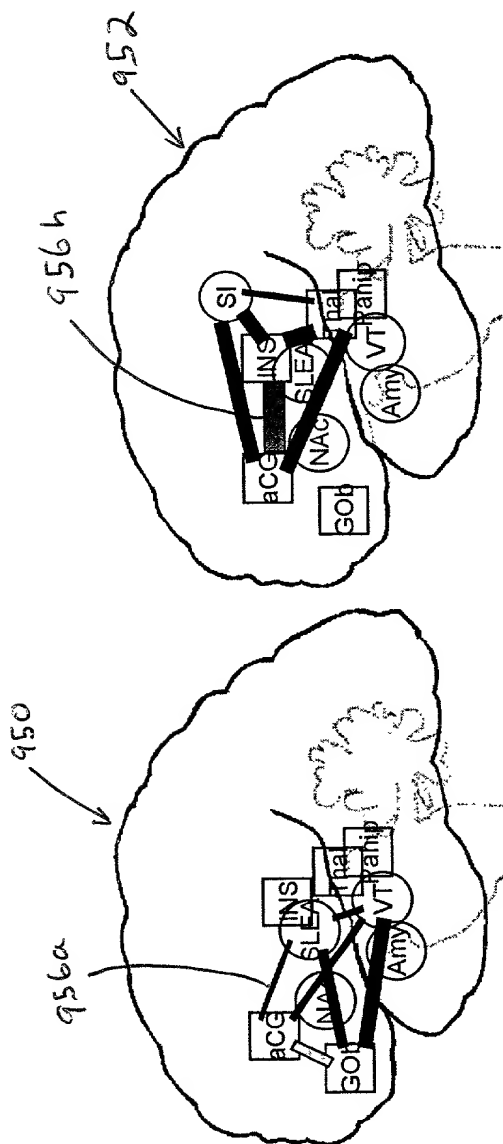


FIG. 11F

METHOD AND APPARATUS FOR OBJECTIVELY MEASURING PAIN,
PAIN TREATMENT AND OTHER RELATED TECHNIQUES

Lino Becerra, Et Al.
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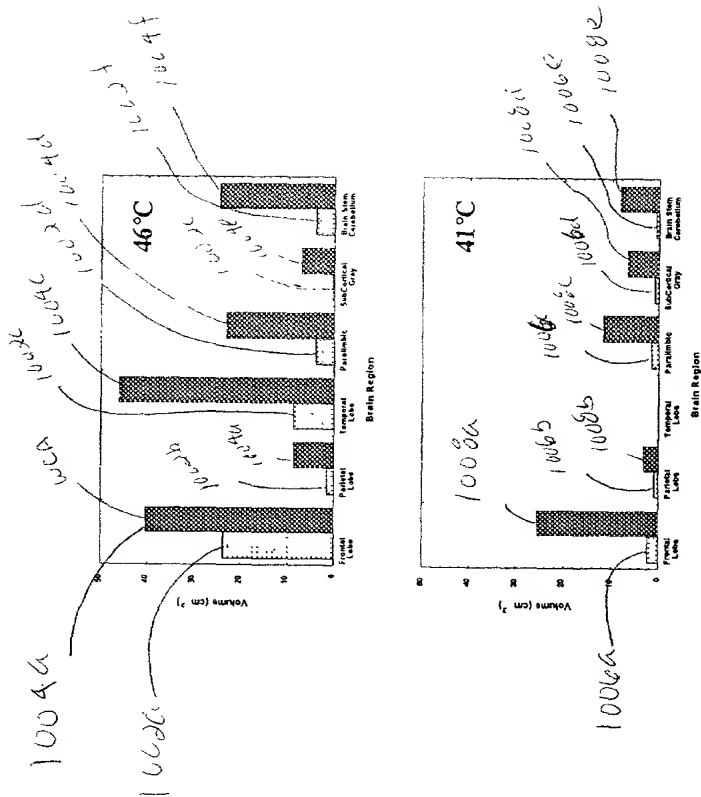


Figure 116

METHOD AND APPARATUS FOR OBJECTIVELY MEASURING PAIN,
PAIN TREATMENT AND OTHER RELATED TECHNIQUES

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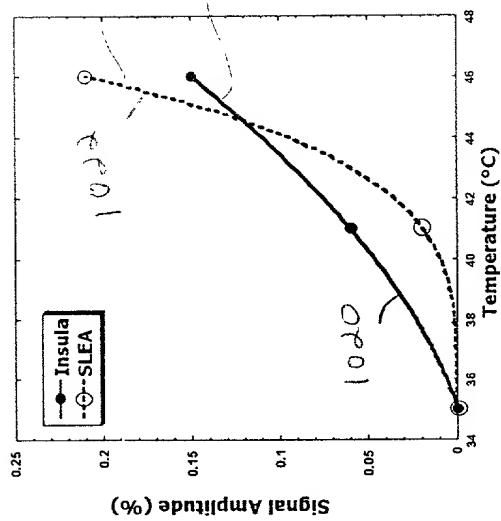


Figure 11 H

METHOD AND APPARATUS FOR OBJECTIVELY MEASURING PAIN,
PAIN TREATMENT AND OTHER RELATED TECHNIQUES

Lino Becerra, Et Al.
CASE NO. MGH-004BUS

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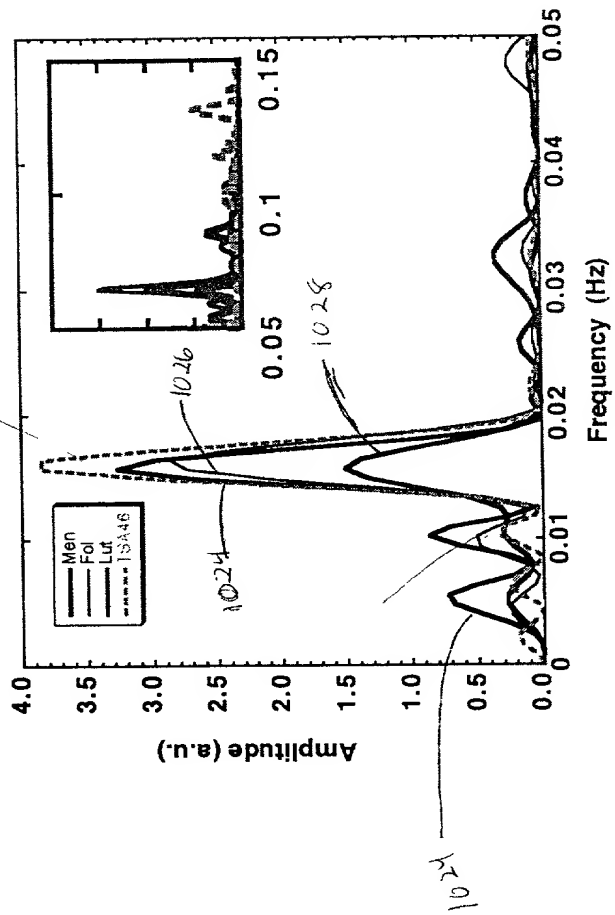


Figure 11 I

METHOD AND APPARATUS FOR OBJECTIVELY MEASURING PAIN, PAIN TREATMENT AND OTHER RELATED TECHNIQUES

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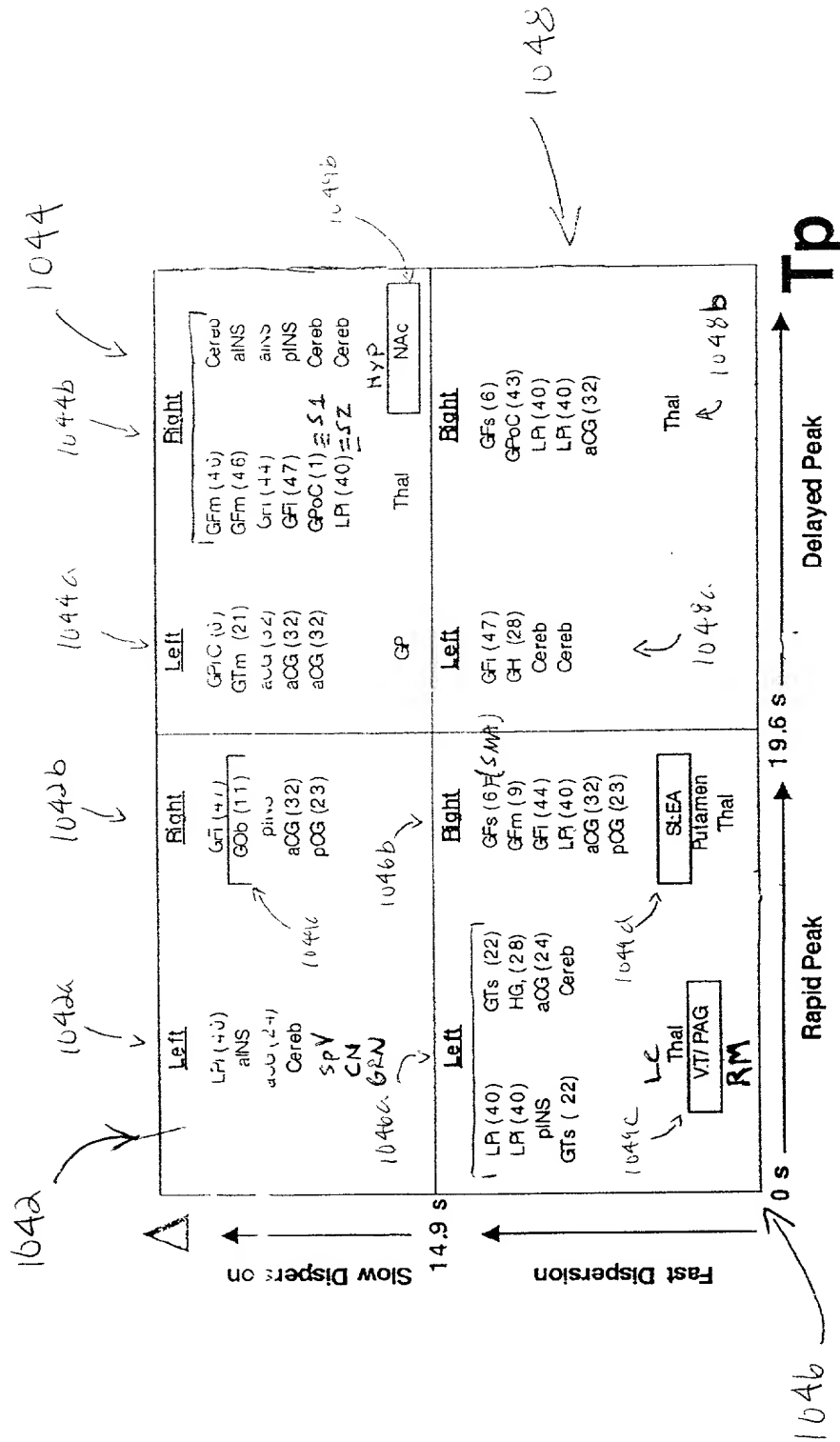


Fig 11J

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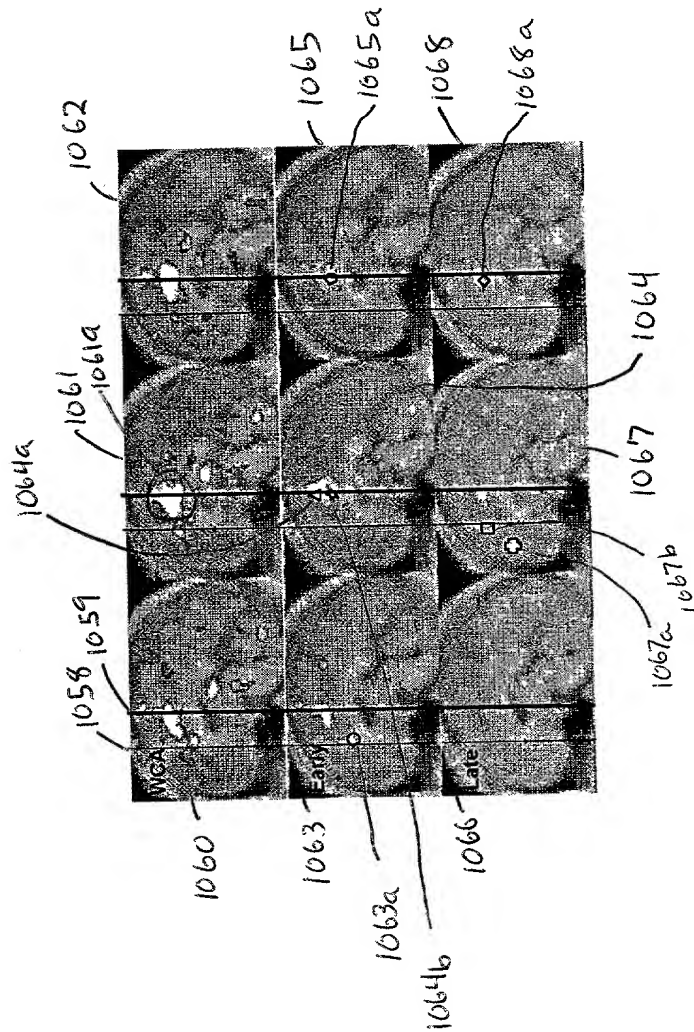


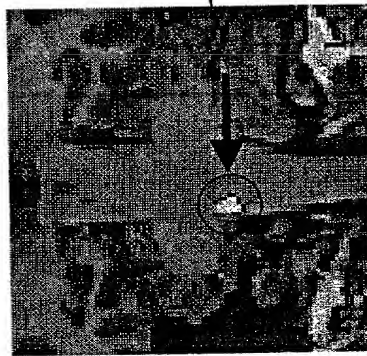
Figure 1K

METHOD AND APPARATUS FOR OBJECTIVELY MEASURING PAIN,
PAIN TREATMENT AND OTHER RELATED TECHNIQUES

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FIG. 12A

FIG. 12



1206

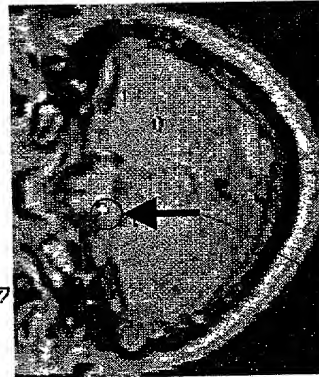


FIG. 12A

FIG. 12B



FIG. 12D

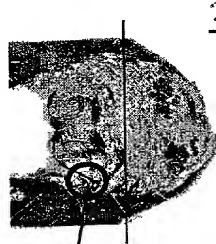


FIG. 12E



FIG. 12F

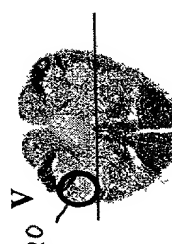
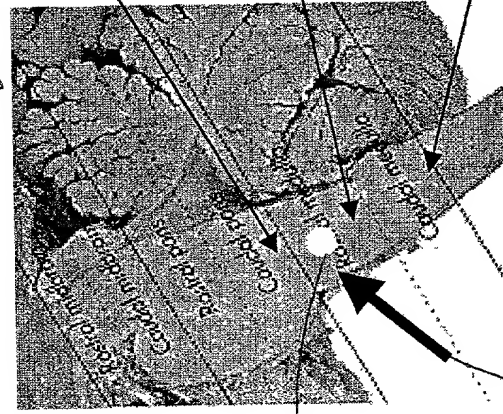


FIG. 12C



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FIG. 13 is a graph showing a signal 1300 over time. The x-axis is labeled "Time(s)" and ranges from 0 to 140. The y-axis ranges from -2 to 3. The signal 1300 is a jagged line. A shaded region 1306 is present between approximately 40 and 100 seconds. Handwritten labels 1308a, 1304a, 1302a, 1304b, 1302b, and 1304c point to specific features on the signal and the shaded region.

Fig 13

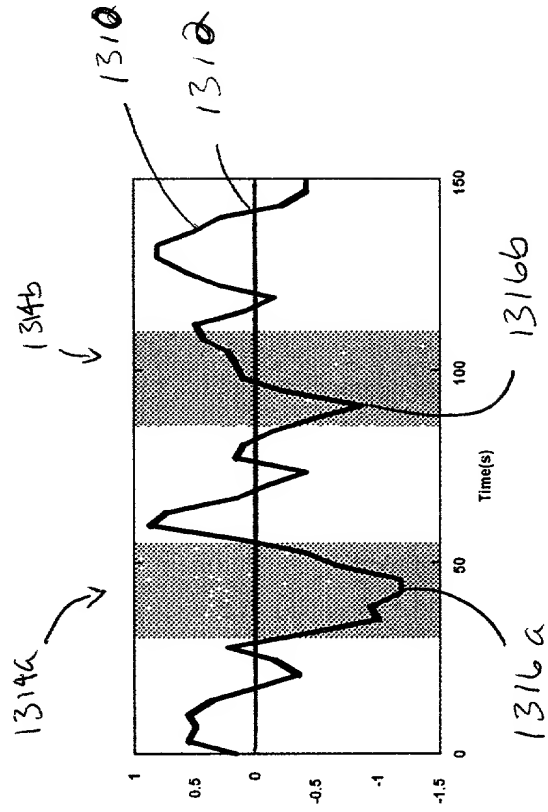


Fig 13A

METHOD AND APPARATUS FOR OBJECTIVELY MEASURING PAIN,
PAIN TREATMENT AND OTHER RELATED TECHNIQUES

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CASE NO. MGH-004BUS

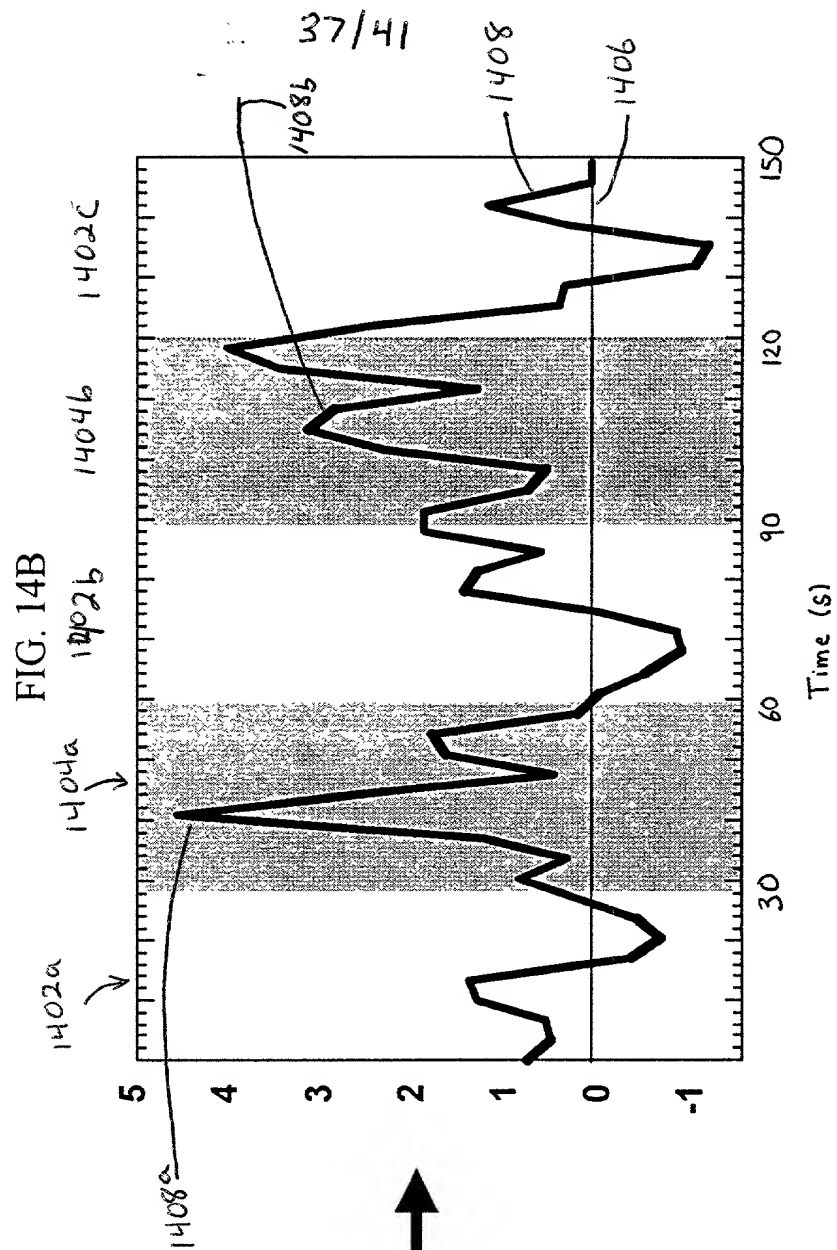


FIG. 14A

METHOD AND APPARATUS FOR OBJECTIVELY MEASURING PAIN,
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FIG. 15A is a schematic diagram of a 3x3 grid of circular elements, each containing a small circular element. The grid is labeled 1502. The top row is labeled 1503, the middle row is labeled 1504, and the bottom row is labeled 1505. The left column is labeled 1506, the middle column is labeled 1508, and the right column is labeled 1512.

FIG. 15A

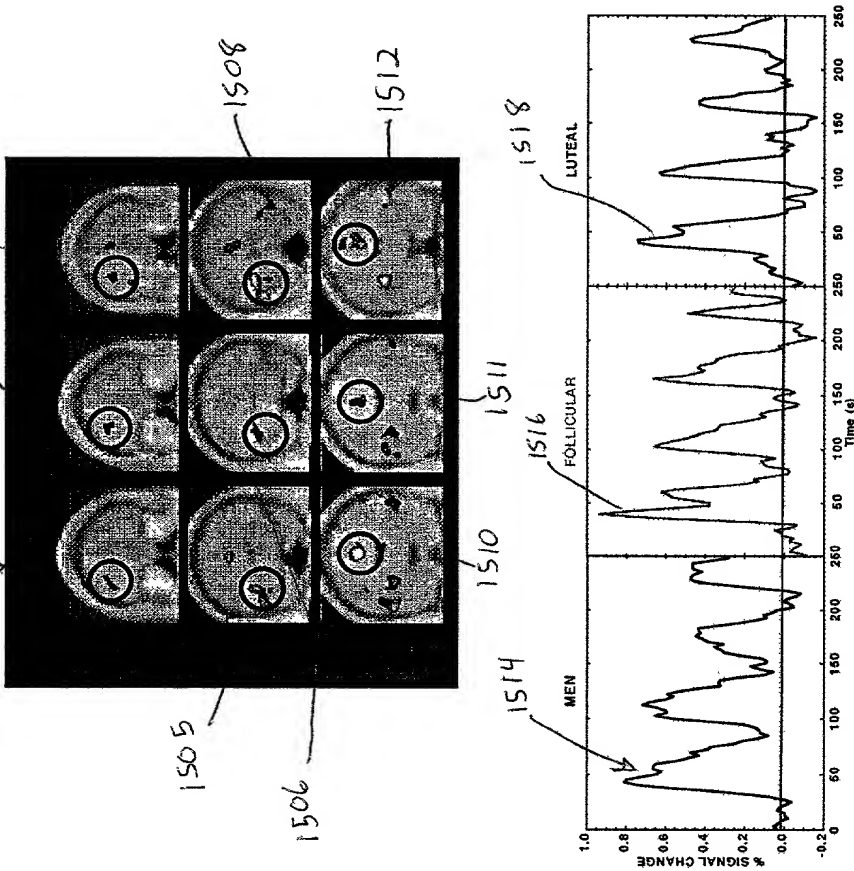


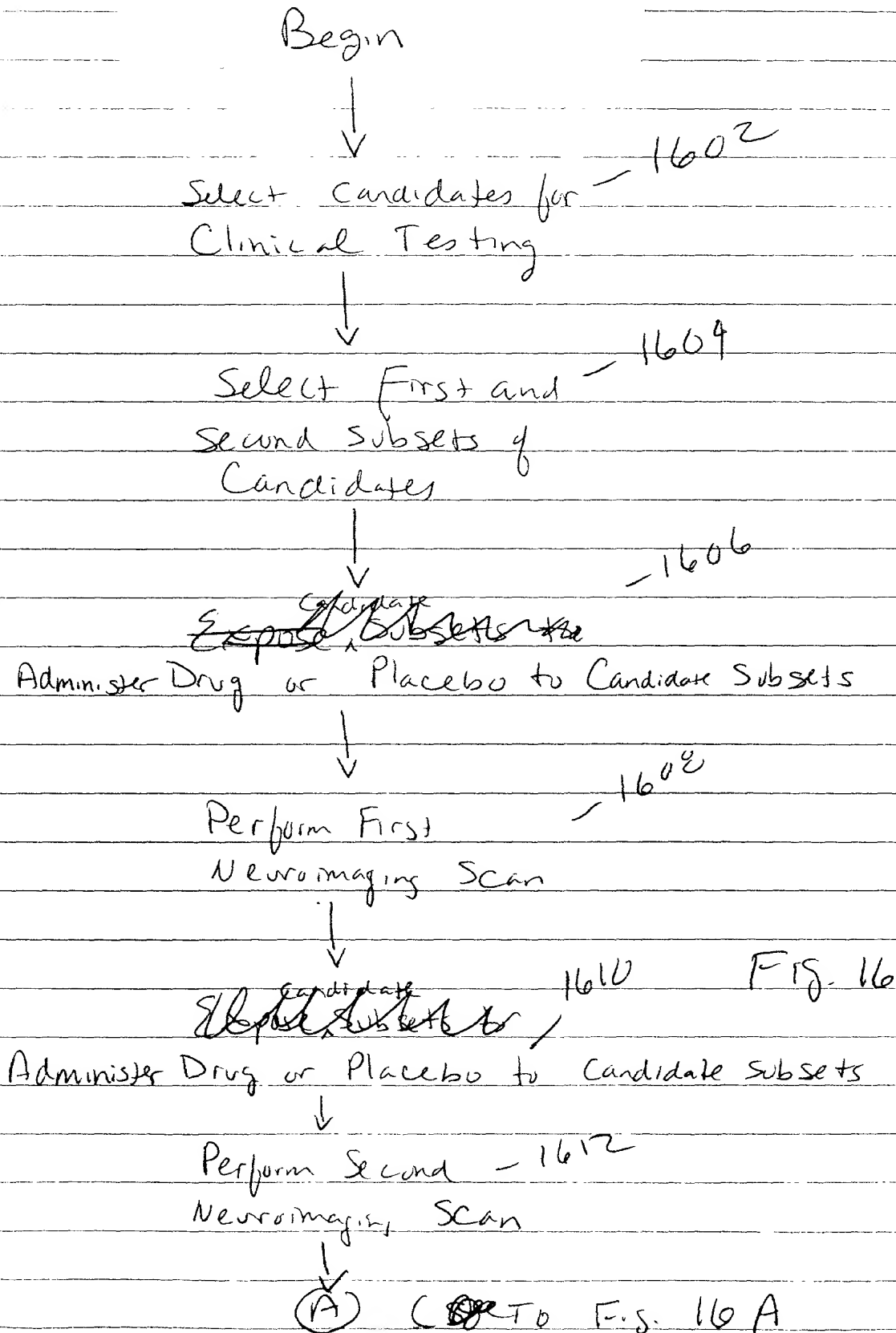
FIG. 15B

FIG. 15C

METHOD AND APPARATUS FOR OBJECTIVELY MEASURING PAIN,
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(B) (from Fig. 16)

[Handwritten signature]



Measure physiological and psychophysical
Responses of First and Second
Candidate Subsets

1614



Measure physiological
and psychophysical Responses
of First and Second Candidate Subsets

1616



Correlate Neuroimaging Data
With Psychophysical and Physiological
Responses

1618



END

Fig. 16A

METHOD AND APPARATUS FOR OBJECTIVELY MEASURING PAIN,
PAIN TREATMENT AND OTHER RELATED TECHNIQUES

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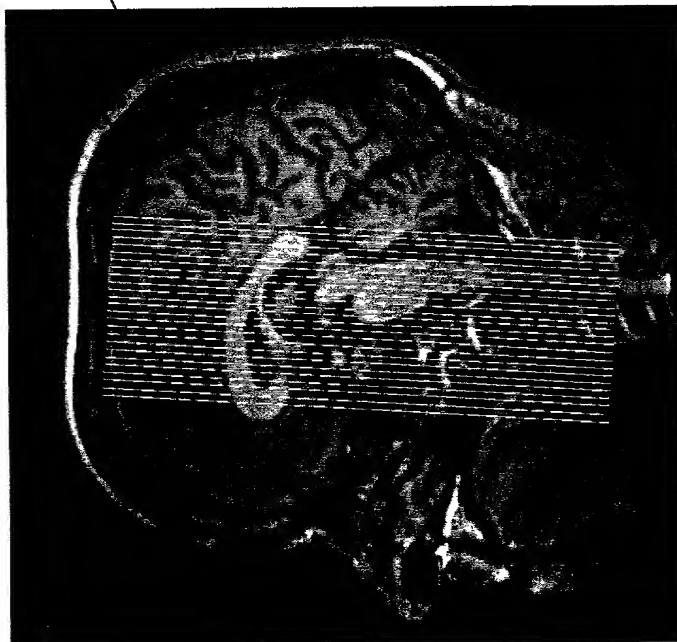


Fig. 17